



# THE ASSAM GAZETTE

অসাধাৰণ

EXTRAORDINARY

প্ৰাপ্ত কৰ্তৃত্বৰ দ্বাৰা প্ৰকাশিত

PUBLISHED BY THE AUTHORITY

নং 518 দিশপুৰ, বৃহস্পতিবাৰ, 14 জুলাই, 2022, 23 আশ্বিন, 1944 (শক)

No. 518 Dispur, Thursday, 14th July, 2022, 23rd Ashadha, 1944 (S. E.)

GOVERNMENT OF ASSAM

ORDERS BY THE GOVERNOR

DEPARTMENT OF HOUSING AND URBAN AFFAIRS

## NOTIFICATION

The 22nd June, 2022

**No.UDD(T)225/2022/6.-** In exercise of the powers conferred by the Section 9 (nine) of the Assam Town & Country Planning Act. 1959 (Assam Act II of 1960) read with Sub-section I of Section 10 (Ten) of Assam Town & Country Planning Act (As amended), the Governor of Assam is pleased to published the following notice regarding the publication of Draft Master plan for Bakolia-2042.

### Notice for the Publication of Draft Master Plan for Bakolia:

1. It is notified that the Draft Master plan for Bakolia prepared by the Directorate of Town & Country Planning, Government of Assam, Town & Country Planning Act.1959 read with Sub-section I of Section 10(Ten) of Assam Town & Country Planning Act (As amended), for the area described in the schedule below is hereby published.
2. Any person or persons affected by the Draft Master plan may submit their objection or opinion in writing to the Director, Town & Country Planning, Government of Assam, Dispur, Guwahati-6 within two months from the date of publication.
3. The Draft Master plan for Bakolia with all relevant papers and maps may be inspected free of Cost during office hours at the Office of the Director, Town & Country Planning, Government of Assam, Dispur, Guwahati-6, the Deputy Director, Town & Country Planning, District Office-Diphu, Karbi Anglong, the Circle office, Bakolia Revenue Circle, Bakolia, Office of the Chairman, Bakolia Municipal Board, Bakolia. Copies of the Draft Master plan for Bakolia are available at the office of the Deputy Director, Town & Country Planning, Diphu, Karbi Anglong on payment.

**SCHEDULE-I****A. SITUATION AND AREA: -**

District: East Karbi Anglong

Master Plan area: 20.21 sq. km.

Revenue Area included in the Final Master Plan of Bakolia

Plan Period – 2042

**1. Bakolia Town Area****2. Other villages included in the proposed Master Plan for Bakolia:**

Nam Bokulia-1,2	Bukulia Ghat	Udali Gaon 1,2
Pup- Sikarighat Dimasa	Era Gaon	Dhan Sing Ronghang
Barai Tisso	Kania Hanse	Henru Abi-I

**3. Description of boundaries within the Master Plan area**

- ☐ East- Kram Kramsa
- ☐ West- Sunpura
- ☐ North- Dikrut Rongchelon
- ☐ South- Chomna Aroi (River)

**KAVITHA PADMANABHAN,**

Commissioner & Secretary to the Government of Assam,  
Department of Housing and Urban Affairs,  
Dispur, Guwahati-6.

## Chapter 1: INTRODUCTION TO MASTER PLAN AREA

### 1.1 Location, regional setting, brief history of the town and surrounding

Bakolia Town Committee had been constituted as per the provisions of Karbi Anglong District (Administration of Town Committee) Act, 1954. The Karbi Anglong Autonomous Council had framed the Karbi Anglong District (Constitution of Town Committee) Rules, 1958 (hereinafter referred to as "1958 Rules").

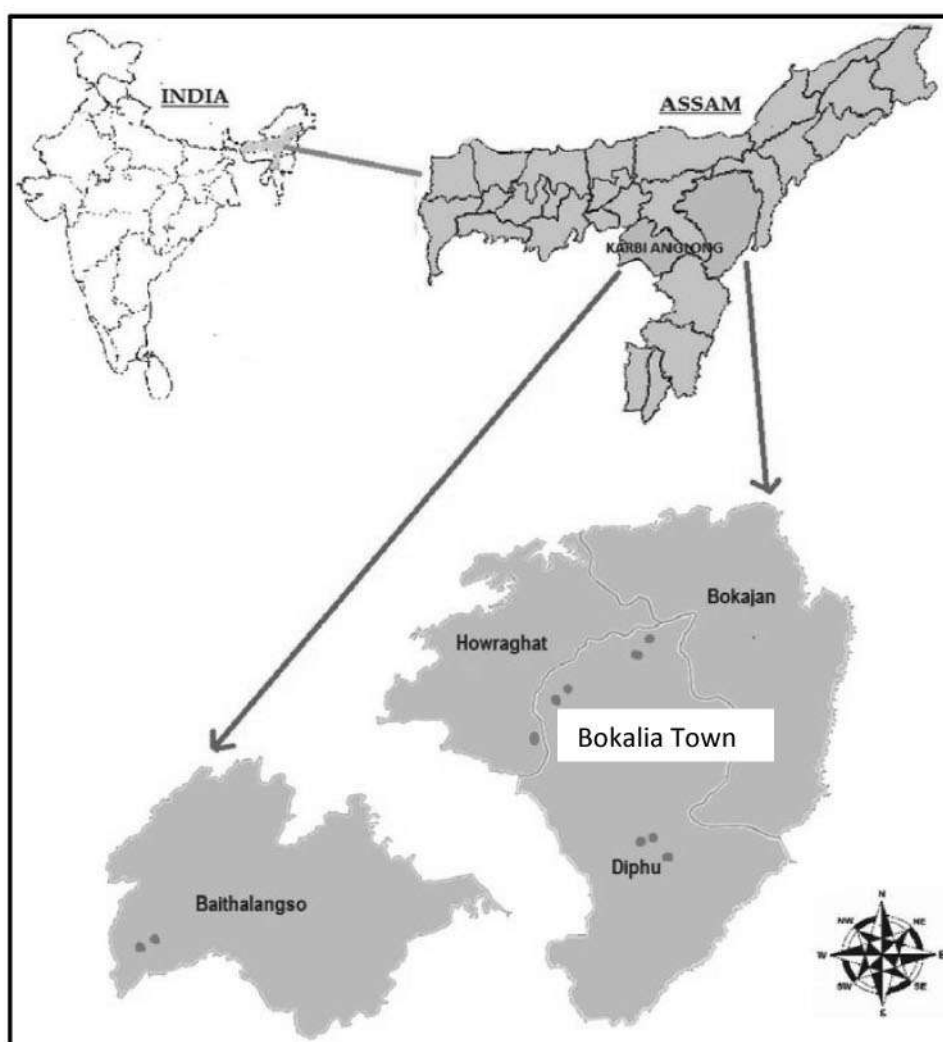


Figure 1.1 Location Map of Bakolia Town

### 1.2 Climate

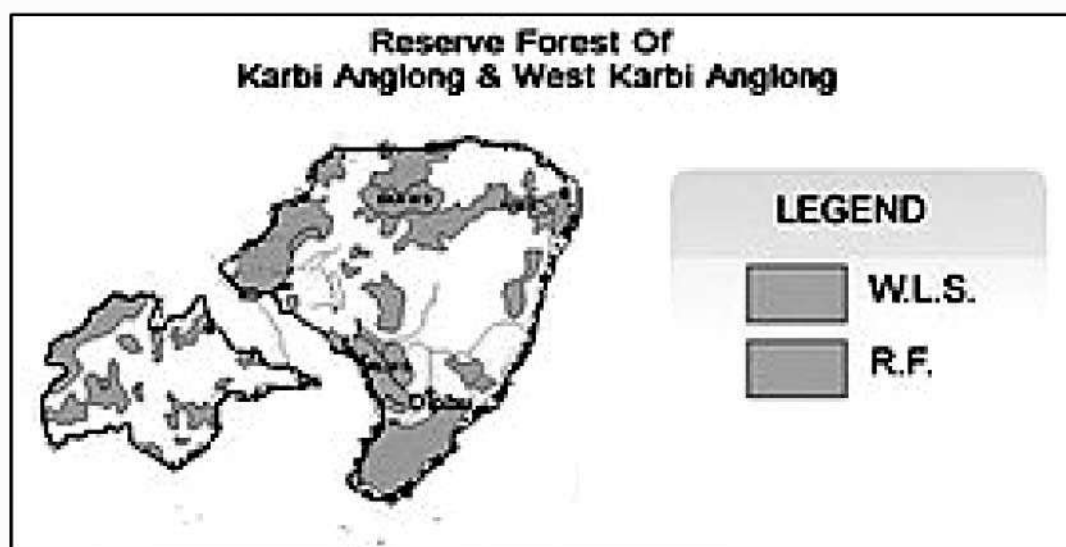
Due to variation in the topography, this hill zone experiences different climates in different parts. The winter commences from October and continues till February. During summer, the atmosphere becomes sultry. The temperature ranges from 6 degree to 12 degree in winter and 23 degree to 32 degree Celsius in summer. The average rainfall is about 2416 mm.

### Topography

The districts plateau are an extension of the Indian Plate (The Peninsular Block) in the Northeast India. This area receives maximum rainfall from the Southwest summer Monsoon from June through September. Numerous rivers and tributaries flow in these districts such as the Dhansiri, Longnit, Jamuna, Kolioni and Nambor. The district is bounded by Golaghat district on the east and on the north, Meghalaya state and Morigaon district on the west, Nagaon and Dima Hasao district and Nagaland state on the south. The district is located between 25° 33' and 26° 35' North latitude and from 92° 10' to 93° 50' East longitude.

### Flora and fauna

The Kangthi waterfall, situated in Kangthi Village, approximate 12 kilometers away from Dengaon in Karbi Anglong district of Assam in India.



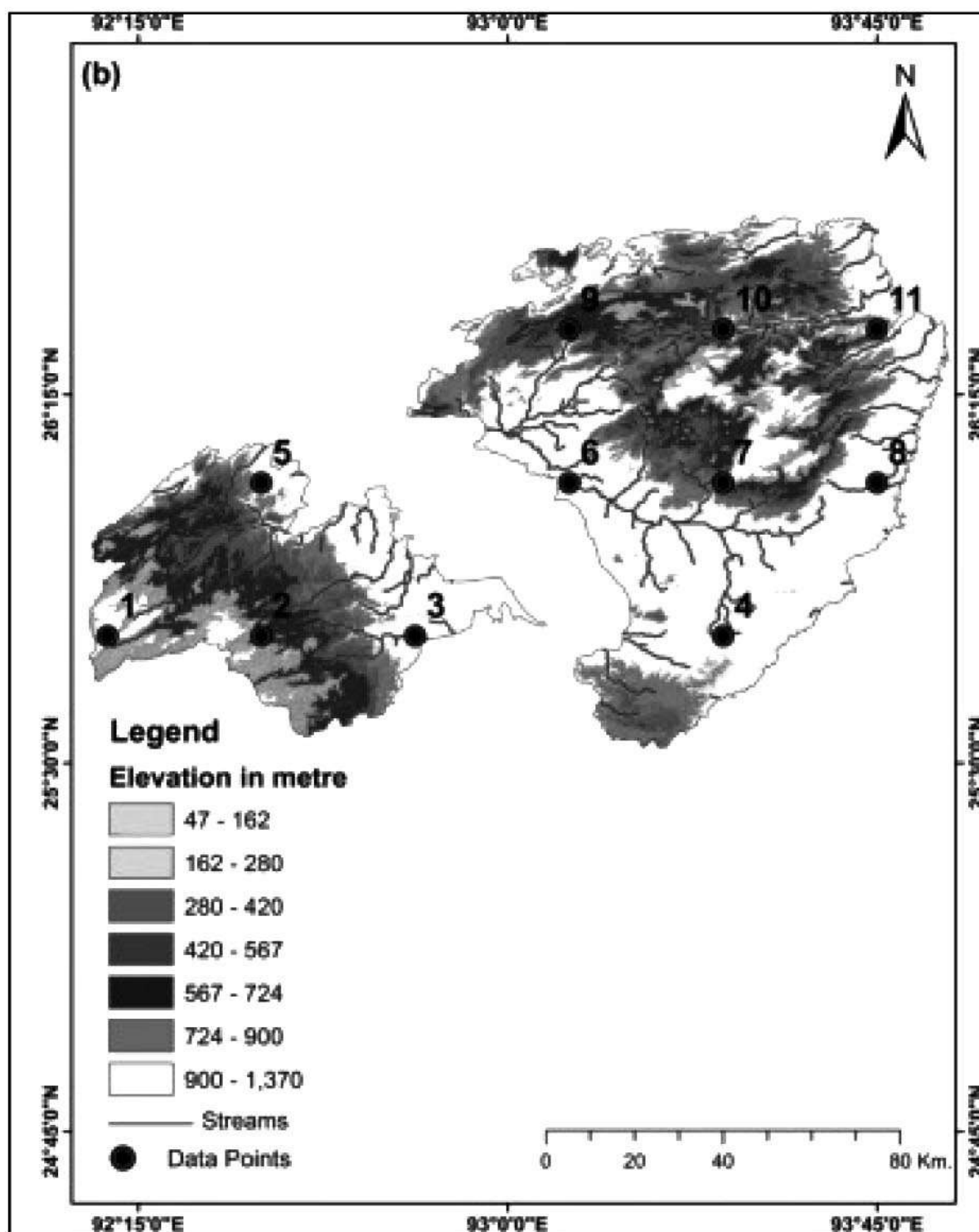
**Figure 1.2 Reserve Forests and Wildlife Sanctuaries map of Karbi Anglong.**

About 40% of Karbi Anglong is covered with forest. According to MSME-Development Institute, Diphu The important forest types found in Karbi Anglong District are: Moist semi-evergreen forests, Moist Mixed Deciduous forests, Riverain Type and Miscellaneous type with scattered pure or mixed patches of bamboos. These forest areas are natural museums of living giant trees, a treasure house of rare, endemic and endangered species, a dispensary of medicinal plants, a garden for Botanists, a gene bank for economically important organisms, a paradise for nature lovers and a laboratory for environmentalists. Threatened species in the



area include Asian elephant, Bengal tiger, Clouded leopard and Leopard, Hoolock gibbon, Pangolin, Porcupine Slow loris etc.

Figure 1.3: Physiography of the District



### 1.3 Geography

#### A) RIVERS:

There are numerous rivers and tributaries in the district. Among these, the most important are as named below :-

Table 1.1: Rivers in the Karbi Anglong District				
Sl.No.	Name of the River		Sl.No.	Name of the River
1	Amreng River		6	Nambor River
2	Borpani River		7	Deopani River
3	Kolioni River		8	Jamuna River
4	Dhansiri River		9	Patradisha River
5	Dikharu River		10	Longnit River
			11	Doigrung River

#### B) FORESTS:

The forest area covered is about 4,922.019 sq. km with 14 State R.F. and 17 District Council R.F. in the district.

#### C) HIGHEST MOUNTAIN PEAK:

Even though, the district is dotted with hills, a few of which can be categorized into Mountain. Among them, the highest is the Singhason Peak which is at about 1360 metres above the sea level.

#### D) NATURAL RESOURCES:

**MINERALS:** The different kinds of minerals found in this hill district which are as below:

1. Limestone: Found in the Dillai and Sainilangso area.
2. Chinaclay: Found in Upper Deopani and Silonijan area.
3. Feldspar: Found in Koilajan area.
4. Coal: Found in Koilajan and Silbheta area.

#### E) AGRICULTURE:

The district is basically an agricultural district. Different types of agricultural crops are cultivated among which paddy is the main crop. Except for the valleys, the people follow the settled system of cultivation.

**F) ROADS AND COMMUNICATION:**

The district is well connected with other districts through various routes. On the north it is covered by NH-36 and on the east by NH-39. The internal routes are covered by the P.W.D.

- Road distance from Guwahati to Diphu (via NH37 and 36) : 259 KM
- Road distance from Dimapur to Diphu (via NH 36): 55 KM

**G) RAILWAYS:**

The N.F. Railways passes through the district touching only a few points along the boundary. They are Borlangphar, Langsoliet, Nilalung, Diphu, Doldoloi, Dhansiri, Rongapahar, Khotkhoti and Bokajan.

- Railway distance from Guwahati to Diphu: 213 Km
- Railway distance from Dimapur to Diphu: 38 Km

**H) AIRPORTS:**

There is no airport in the district. The nearest airport is in Dimapur which is 61.2 km away from Diphu.

**I) INDUSTRIES:**

Although the district is abundant in raw materials only a few industries have come up. They are as shown below:-

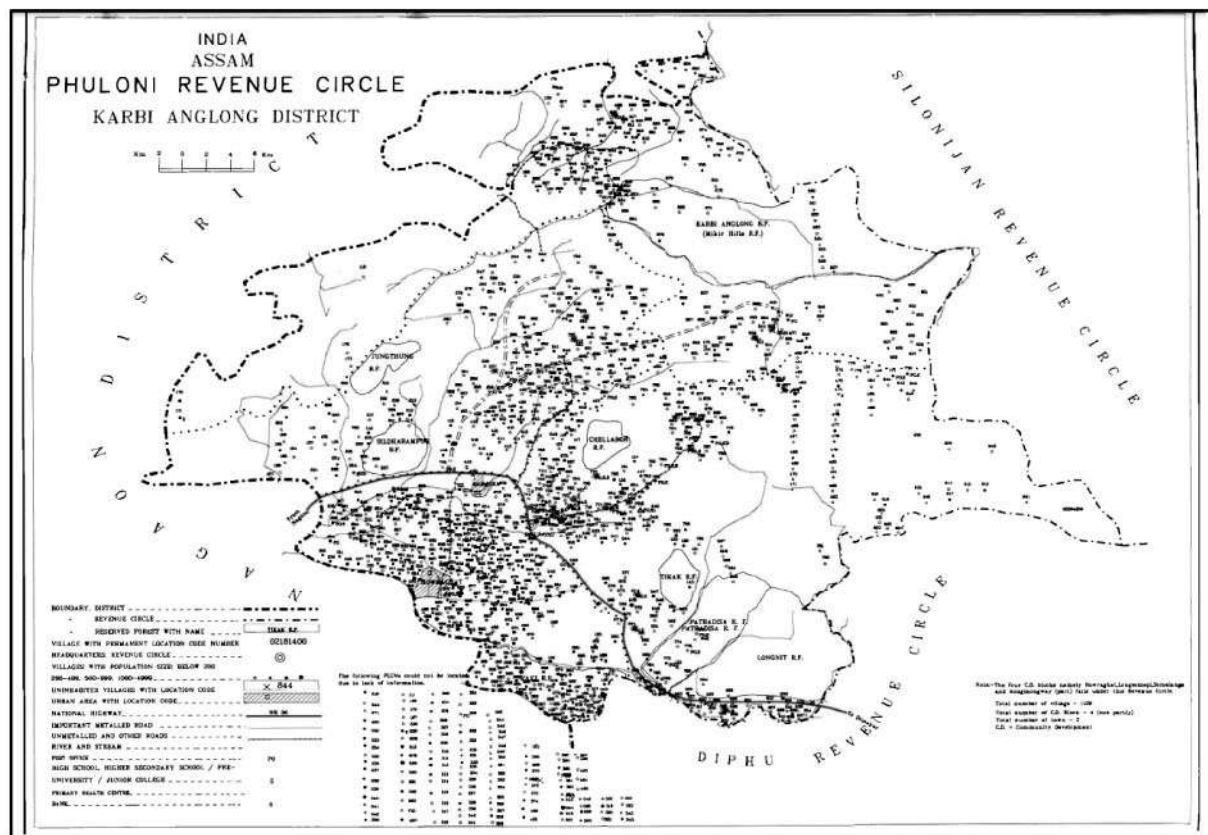
A. 1.Bokajan Cement Plant ; 2. Karbi Chemical Mini Cement Plant ( under construction)

B. Food Processing: Assam Hills Small Industries Development Corporation (KANACH)

C. AGRO-BASE: 1. Rubber Plantation Industry ; 2. Citronella Plantation Industry ;

D. TEA GARDEN: There are a total of 15 (fifteen) numbers of Tea Gardens in the district which are :

Lengree T.E, Bokajan T.E, Lahorijan & Nirmal Kumar T.E, Ramanagar T.E, Deopani T.E, Dhansiri T.E, Banspaty T.E, Barpathar T.E, Bhagawati T.E, Numburnadi T.E, Silonijan T.E, Rangasali T.E, New Rangasali T.E, Green Valley T.E, Sobaneswari T.E

**Figure 1.3 Regional Setting of the Town**

**Source: Census of India, DCH, 2001**

The town is part of the Phuloni revenue circle located in the in the eastern plains of the block. The proposed Master plan would incorporate the revenue limits of the BAKOLIA Town Committee areas as well the neighbouring villages. The town located on the major Asian Highway No.1 passing through the town, making it potential development centre for the services. The towns Bakolia and region together can serve the population of over 1 lakh in next 50 years. The support for the railway infrastructure in future would be needed to improve the economic potential.

The region is prone to floods, flash floods in the plains and terrain regions though managed by the irrigation departments needs to have all weather road connectivity. Improvement in public transport, regional commercial linkages and tourist flow would boost the economic activities. The promotion and protection of the tribal culture and ethnicity of the communities are important components of the Karbi Anglong district. The regional growth would need socio-economic as well as cultural assimilation of the locals to the opportunity.

Regional improvement in the regional infrastructure, social amenities and industrial investment would be key to development of the towns important for the district. The advantage posed by the Asian Highway is immense and sustainable economic and environmental ways must be provided to the region to harness the development potentials.

#### 1.4 Proposed Master Plan Area

The master plan for the town has been proposed to include the town and neighbouring villages. The specific plan can be made inclusive of town and continuent villages in order to achieve organic development. The projects and proposals would include total planning areas. The following locations are now part of the planning area;

<b>Table 1.2:Proposed Master Plan Area limits - BAKOLIA</b>		
<b>Name (Census)</b>	<b>Households</b>	<b>Population (2011)</b>
<b>Bakolia</b>	<b>448</b>	<b>2202</b>
Nam Bokulia-1,2	220	1225
Pup- Sikarighat Dimasa	50	272
Barai Tisso	0	0
Udali Gaon 1,2	358	1731
Henru Abi-1	37	278
Bukulia Ghat	63	363
Era Gaon	60	329
Kania Hanse	0	0
Dhan Sing Ronghang	19	107
<b>Total</b>	<b>1255</b>	<b>6507</b>

The habitations having continuity, geographical proximity and economically integrated has been made now part of the Urban Area henceforth to be termed as '**BAKOLIA MASTER PLAN AREA**'. This is proposed limit of the planning area not interfering in the functioning of the urban local bodies and respective panchayats.

#### 1.5 Need for Master Plan

The needs for the development for the smaller towns and villages have been felt by all given the improvement and aspiration of the people. The town committee as per the policy directions by the Government of Assam and Government of India wishes to participate in the development of Karbi Anglong. The KAAC have wished and directed the towns committee and municipal board to prepare the Master Plan to fulfil the aspiration and vision of leaders

and people. The inspiration of the current chairmen, KAAC, MLA and MPS of the region is important for the achievement of the mile stones.

The demographic growth of the region, the need for infrastructure and sustained development of the Karbi Anglong district the proposed Master Plan Area would be ideal and sufficient for the development of town. The region would be required to have developed economy, infrastructure and cultural ethos led by the clusters important for the development of villages and its people.

### **1.6 Autonomous Hill District Council**

Under the 6th Scheduled of Constitution of India, the Mikir Hills now Karbi Anglong district aspires the status of an autonomous hills district under para-1 having independent district council under para-2 with the headquarters at Diphu. And under para-20 of the same scheduled, Karbi Anglong is declared as a tribal area which came into being on 23rd June 1952 while Late Bishnu Ram Medhi was the Chief Minister of Assam at that time.

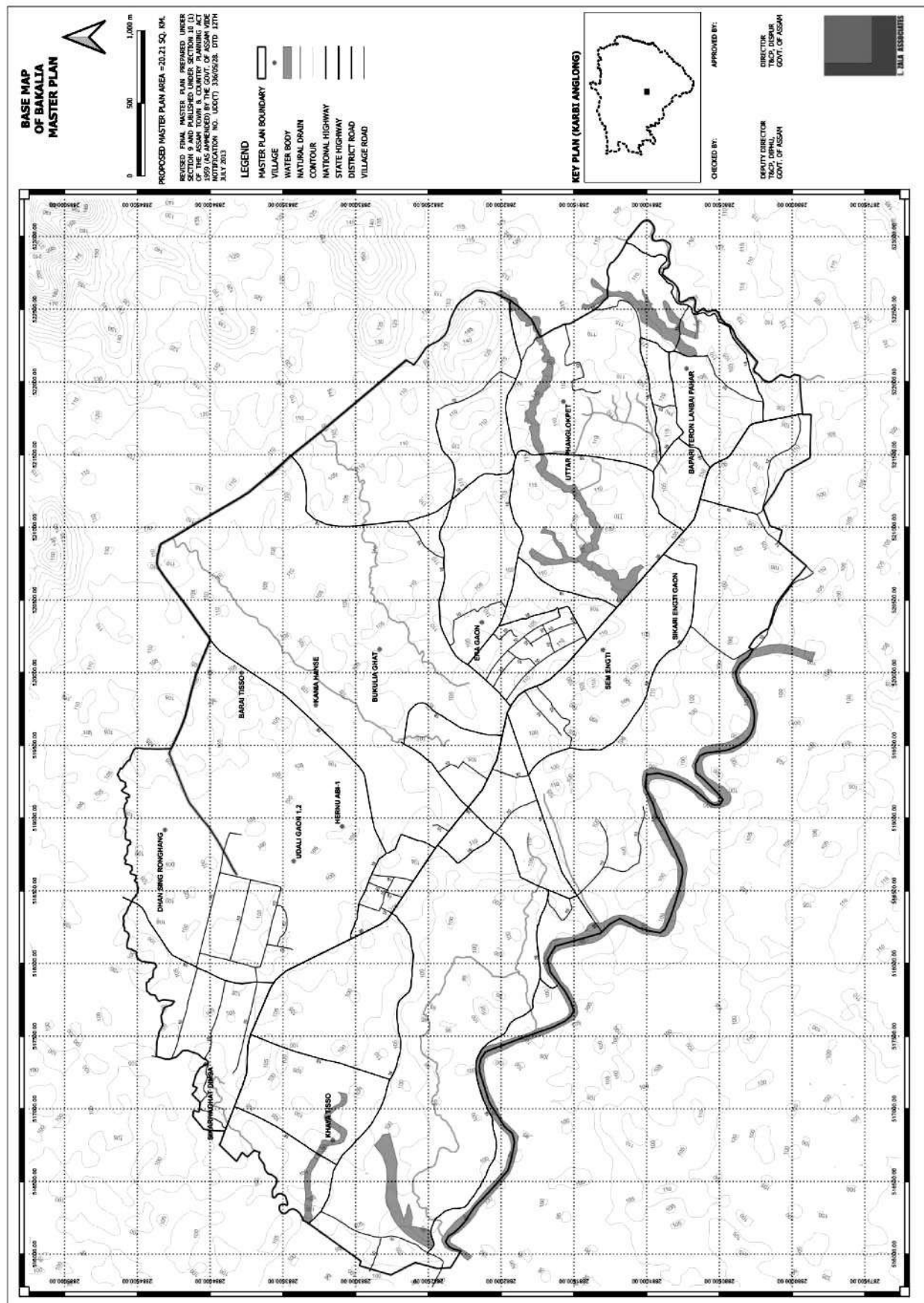
The Mikir Hills District Council consists of 26 members. The District Council has both executive and legislative power. Thus two autonomous Hills district formed for United Mikir and Cachar Hills have been brought under one single administration for the purpose of general administration till bifurcation on 1970. And after that Mikir Hills district renamed as Karbi Anglong on 1976.





### **1.7 Bakolia Town Committee**

The Bakolia Town Committee is the local self-government for the town dealing with the social, infrastructure and economic development of the town. The KAAC sanctions the annual budget for the town and the board has been planning to use the master plan in order to improve suggest and provide infrastructure facilities in the town. The Chairmen of the municipal board and members have taken efforts in the interaction with the planning team, including external experts in order to suggest the plans. The vision for the year 2042 is shared by the board with the planning team, wherein *the town needs to provide for tremendous economic opportunity, investment destination by improvement in the amenities.*



## CHAPTER 2 : DEMOGRAPHY

### 2.1 Introduction

Bakolia (referred in census of India as '*Northern Range Bakolia*') is a town located in Diphu Circle of Karbi Anglong district, Assam with total 448 families residing. The Bakoliatown has population of 2202 of which 1135 are males while 1067 are females as per Population Census 2011. The Bakolia master plan area has estimated population of 6507 persons of which 3289 males (50.55%) and 3218 (49.45%).

Bakoliatown is administrated by Town Committee who are the elected representative of town.

**Table 2.1: Demographic Details BakoliaMaster Plan Area**

Name	T_HH	T_P	T_M	T_F	P_06	M_06	F_06	P_SC	M_SC	F_SC	P_ST	M_ST	F_ST
<b>Bakolia(TC)</b>	448	2202	1135	1067	475	237	238	5	2	3	1857	959	898
Nam Bokulia-1,2	220	1225	606	619	194	89	105	231	110	121	434	209	225
Pup- Sikarighat Dimasa	50	272	143	129	34	15	19	0	0	0	168	87	81
Barai Tisso	0	0	0	0	0	0	0	0	0	0	0	0	0
Udali Gaon 1,2	358	1731	877	854	164	93	71	29	15	14	67	29	38
Henru Abi-1	37	278	130	148	43	20	23	1	1	0	277	129	148
Bukulia Ghat	63	363	176	187	62	30	32	108	52	56	0	0	0
Era Gaon	60	329	166	163	46	16	30	0	0	0	329	166	163
Kania Hanse	0	0	0	0	0	0	0	0	0	0	0	0	0
Dhan Sing Ronghang	19	107	56	51	11	7	4	0	0	0	107	56	51
<b>Total UA</b>	<b>1255</b>	<b>6507</b>	<b>3289</b>	<b>3218</b>	<b>1029</b>	<b>507</b>	<b>522</b>	<b>374</b>	<b>180</b>	<b>194</b>	<b>3239</b>	<b>1635</b>	<b>1604</b>

Abbreviation - HH=Households, P=Persons, T=Total, M=Male, F=Female, SC= Scheduled Caste, ST=Scheduled Tribe

### 2.2 Density Pattern

In Bakolia Master Plan Area based on the existing trend of development, availability of building land, projected population etc. three density zone have been proposed. Residential use area of the proposed Master Plan is marked as 25% under high density, 25% under medium density and 55% under low density zone. The gross residential density of three different type have been identify for Bakolia Area are as follows-

- Low Density: <50 persons per hectare

- Medium Density: 50- 99 person per hectare
- High Density: >99 person per hectare

### **2.3 Population Distribution**

Bakolia is a Town Committee city in district of Karbi Anglong, Assam. The Bakolia city is divided into 6 wards for which elections are held every 5 years. The Bakolia Town Committee has population of 6507 of which 3289 are males while 3218 are females as per report released by Census India 2011. The ST population today constitute 16 percent of the total population. The town needs careful planning for the benefit for the local population and maintain the regional balances. The majority of the population are the scheduled tribe except Eradighalpani where majority are from the general category and may be migrants from outside town. There are 1255 households in the urban area and about 450 households in the town area.

### **2.4 Population Density**

Population density refers to the number of people living in an area per square kilometre. Bakolia Master Plan area covers 20.21 sq.km of area with a total population of 9110, as per estimate, 2022. The density of the Master Plan area is 451 persons per sq.km, which is more than the district average of 97 persons per sq.km as per 2011 census. It can be inferred that the area is highly congested and there is need of housing. The future population density is expected to rise at 577 and 738 person per sq.km by the year 2032 and 2042 respectively.

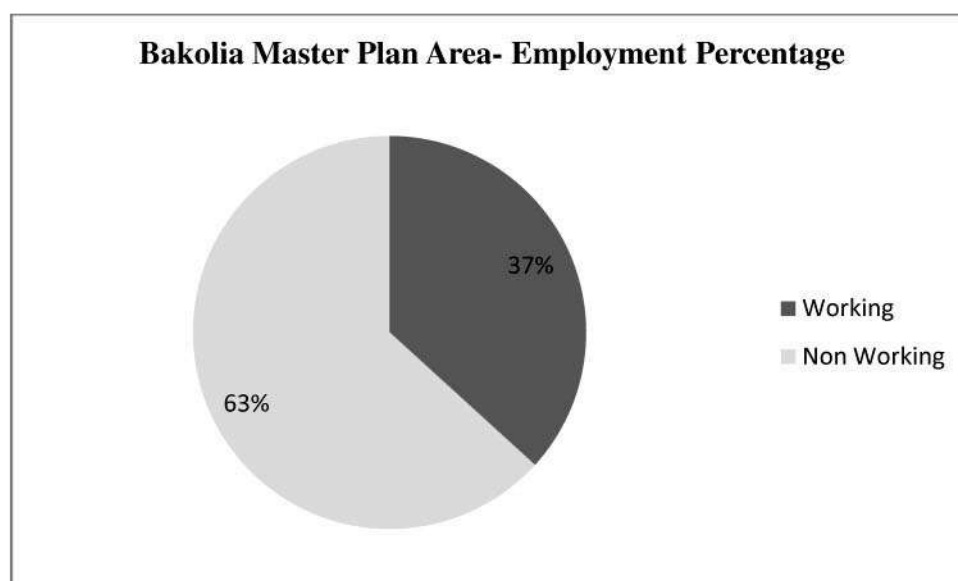
### **2.5 Sex Ratio**

In Bakolia town population of children with age 0-6 is 475 which makes up 21.57 % of total population of village. The master plan area has children (0-6 age) is 15.81%. Average Sex Ratio of master plan area is 978 which is higher than Assam state average of 958. Child Sex Ratio for the master plan area as per census is 1030 females per thousand males, higher than Assam average of 962.

### **2.6 Working/Non-Working Population**

As per estimate, 54.80 % of the Bakolia master plan area are literate. However, Only 37% of the population is working. This share of unemployment indicates that there is lack of

opportunities in the area. The master plan proposal highly demands infrastructure to boost the employment generation of the region.



**Figure 2.1: Employment Share in Bakolia**

## **2.7 Dependent Population**

Out of the total population of Bakolia master plan area, 30% of the population ranges between 0-6 years and 65 years and above, as estimate. 15.6% of this 30% share is by 0-14 years of population. This indicates that in the near future there is more youth percentage share to contribute to the employment of this area.

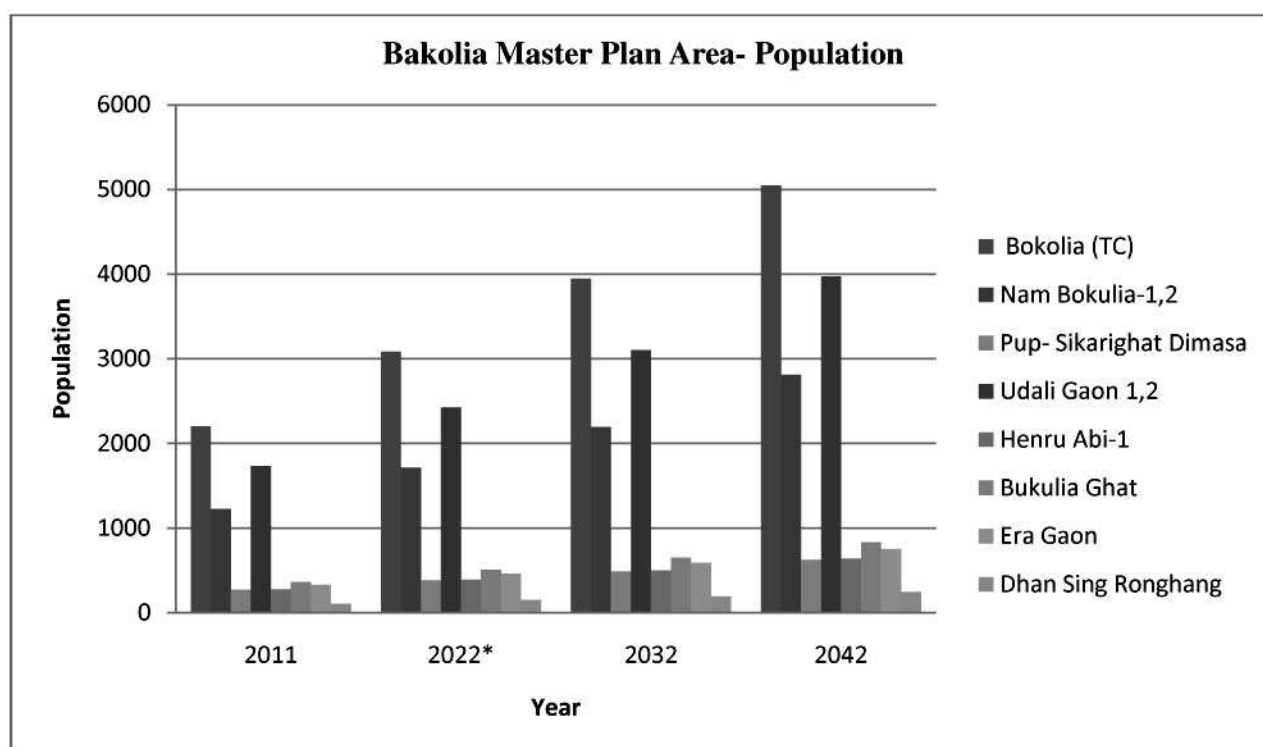
## **2.8 Household Size and Density**

Household size refers to the number of persons (irrespective of age) living as an economic unit. This does not require that they be in a physically separate housing unit. It is expressed as person per household. There are 1255 households with 6507 persons in the urban area and about 448 households with 2202 persons in the town area. The average household size of Bakolia Master Plan area is 5.18, which is 4.45 for Nation's average in 2011 census. It is to note that high household size refers to congested living in a household. It can also be inferred that high household size means low per capita income.

## **2.9 Projected Population**

Population projection refers to the forecasting of population in future based on present and past population data. It helps to understand the plan-policy need of an area in terms of

physical, social, economic, environmental factors etc. It is done by Arithmetic method and Geometric Mean method. (\*sufficient data is not available for projection with Incremental Increase method).



**Figure 2.2: Population Estimate and Projection for Bakolia Master Plan Area**

<b>Table 2.2: Population Estimate and Projection for Bakolia Master Plan Area</b>				
<b>Name</b>	<b>2011</b>	<b>2022*</b>	<b>2032</b>	<b>2042</b>
<b>Bokolia (TC)</b>	2202	3083	3946	5051
Nam Bokulia-1,2	1225	1715	2195	2810
Pup- Sikarighat Dimasa	272	381	487	624
Udali Gaon 1, 2	1731	2423	3102	3970
Henru Abi-1	278	389	498	638
Bukulia Ghat	363	508	650	833
Era Gaon	329	461	590	755
Dhan Sing Ronghang	107	150	192	245
<b>Total Master Plan Area</b>	<b>6507</b>	<b>9109.8</b>	<b>11660.54</b>	<b>14925.5</b>



It shows that by 2022 the population of Bakolia Master Plan area will be 9110 persons and in the next decade, 2031, it will be 11660 persons. and in the last projected decade 2042, the population of Bakolia master Plan area will be approximately 14925 persons. Bakolia being one of the important towns of the West Karbi Anglong district with good educational facilities and commercial centres has been major factor for estimation of the population. Another factor is the topography, it being the only town in the district with plain geographic profile for which the development of infrastructure in this area as business centre is convenient.

## 2.10 Literary Level in Master Plan Area

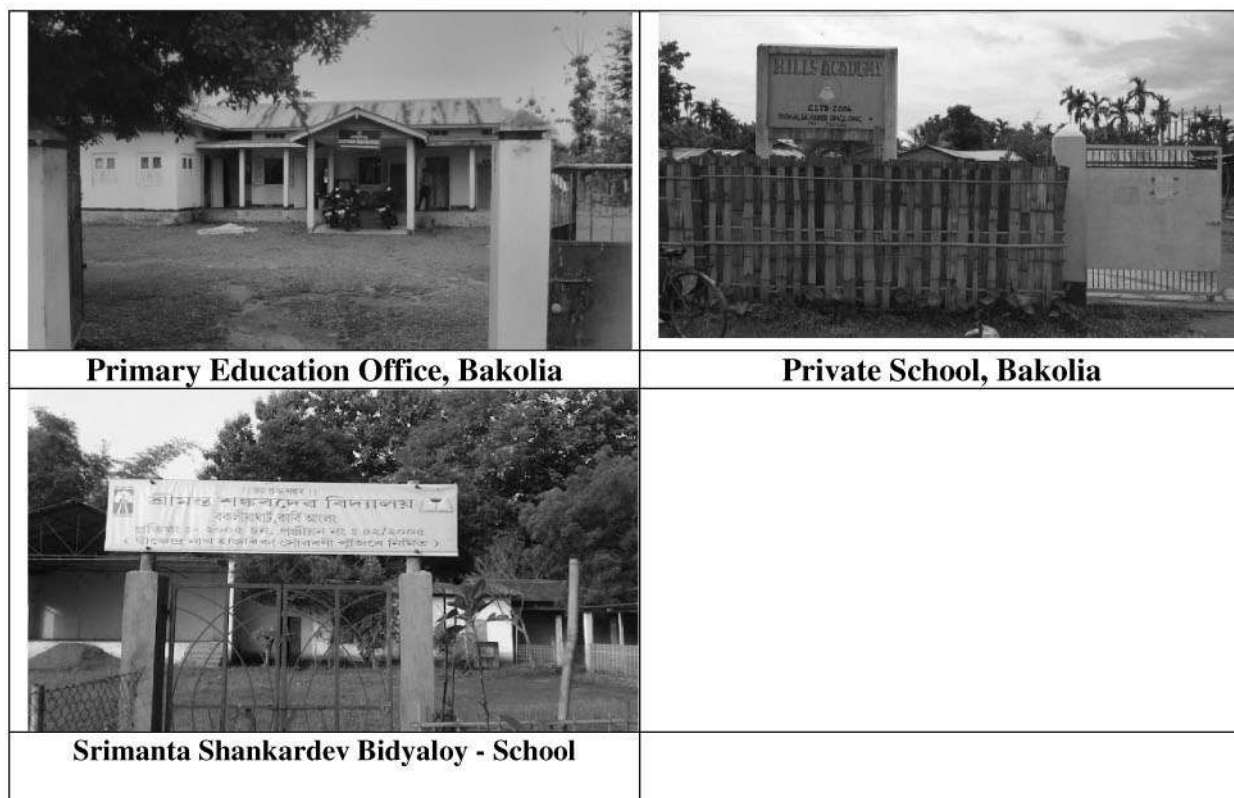
Bakolia town has lower literacy rate compared to Assam. In 2011, literacy rate Bakolia town was 25.98 % compared to 72.19 % of Assam. In Bakolia Male literacy stands at 34.27 % while female literacy rate was 17.15 %. In comparison the master plan area has improved literacy in 2011 with 54.80% where in the male literacy is 60.66 and female literacy is 48.82 %. The literacy rate is expected to have improved between the last decades due to sustained program. However, the concern for the town must be suitably be addressed by the concerned authorities.

Table 2.2: Literacy Level at Bakolia Master Plan Area						
Name	P_LIT	M_LIT	F_LIT	P_ILL	M_ILL	F_ILL
<b>Bakolia</b>	572	389	183	1630	746	884
Nam Bokulia-1,2	733	402	331	492	204	288
Pup- Sikarighat Dimasa	187	111	76	85	32	53
Barai Tisso	0	0	0	0	0	0
Udali Gaon 1,2	1456	757	699	275	120	155
Henru Abi-1	168	87	81	110	43	67
Bukulia Ghat	240	123	117	123	53	70
Era Gaon	180	105	75	149	61	88
Kania Hanse	0	0	0	0	0	0
Dhan Sing Ronghang	30	21	9	77	35	42
<b>Total UA</b>	<b>3566</b>	<b>1995</b>	<b>1571</b>	<b>2941</b>	<b>1294</b>	<b>1647</b>

The town has majority of the population illiterate compared with rest of the district, the literacy in the town area is very poor. The literacy is better in the non-tribal settlements particularly Udali Gaon. The presence of high illiterate population needs to be seriously studied and mainstreaming of the population must be look carefully. Between census year

2011 to 2021 it's expected to reduce the illiteracy level to half. Almost 60 percent of the adult population today might be educated.

More focus on the local languages, primary education and adult literacy must be focused during the next two decade of planning the urban area.



**Figure 2.3: Schools in Bakolia**

The progress of the private education in the town must be encouraged and infrastructure must be improved to retain the school going population up to primary level and later at secondary.

### Chapter 3: ECONOMIC BASE AND EMPLOYMENT

The economy of a region can be determined by analysing the Work Force Participation Rate (WFPR), Occupation structure, Employment status (regular employed, self-employed, casual labour, unemployed), Formal/ Informal sector etc.

#### 3.1 Occupation

As per Census 2011, Bakolia master plan area comprises of 4352 nos. of working population and 7051 nos. of non-working population. 76.86% of the working population are main workers and 23.14% are marginal workers. 22.22% is involved in cultivation, 13% in business, 12% in agriculture and 41.98% of the working population is involved in other like labour, household workers etc. This indicates that there is lack of opportunities in the area. The Master Plan proposal highly demands infrastructure to boost the employment generation of the region.

**Table 3.1: Working Population**

Sl. No.	Occupation	Total No. of Working Persons
1	Cultivators	967
2	Agricultural	526
3	Business	25
4	Service	1827
5	Other	1007
	<b>Total</b>	<b>4352</b>

In Bakolia town out of total population in 2011, 1176 were engaged in work activities. 61.48 % of workers describe their work as Main Work (Employment or Earning more than 6 Months) while 38.52 % were involved in Marginal activity providing livelihood for less than 6 months. Of 1176 workers engaged in Main Work, 688 were cultivators (owner or co-owner) while 21 were Agricultural labourer.

The varied relief features of the region must first be evaluated in order to find out stable and non-useable areas, which can provide infrastructural base to planners. The region has potentiality for developing hydel power, agro based industries and tourist industry.

### 3.1 Economic Base of Town

Economic activities can be anything that makes money. Across the whole economy, we usually separate it into primary, secondary, tertiary and quaternary:

**Primary:** retrieving raw materials from the environment including, fishing, forestry, mining and farming.

**Secondary:** manufacturing and processing these materials into products that can be used. This includes the transport and storage of materials.

**Tertiary:** the provision of services to customers. This includes shops, entertainment and intellectual services such as legal and financial.

**Quaternary:** innovation, research and development of new products and services.

In the urban economy, there is usually no primary industry. Therefore, for this page, economic activity is split into retail, commercial and industrial.

**Retail:** the sale of individual products to individual customers. This most commonly takes place in the city centre, or 'Central Business District', but can occur anywhere in the city and increasingly online

**Commercial:** the provision of services to the public and businesses, usually taking place in offices. It includes legal services, banking, logistics and technology support (e.g. website design). Note: this is a narrow definition of commercial activity for the purposes of this page only. Most sources include retail as a part of commercial activity.

**Industrial:** the manufacturing, processing, transport and storage of goods.

For detailed information about where these activities are found in urban areas, check the page on this site 'Urban land use patterns'. The rest of this page focuses on the reasons why economic activity is found in different parts of urban areas.

### 3.2 Factors Affecting the Location

The following factors are never used in isolation by businesses to decide where to locate. Location is always a compromise between these different issues. This is why all urban areas are different;

- a) Physical factors

- b) Physical factors include (among others):
- c) Terrain: whether the land is hilly or flat
- d) Water supplies
- e) Proximity to coastlines and rivers
- f) Physical hazards e.g. flooding, landslides

In general, the requirements for each type of economic activity are as follows:

- I. Industry: most industrial processes require a large area of land. They also require the land to be relatively flat, so that production lines can operate easily.
- II. Retail: Retail usually requires relatively little land in the CBD, but the land needs to be stable and non-hazardous. Increasingly, out-of-town shopping centres require large areas of land for both the shops and the car parks. They also require the land to be flat so that building is cheaper.
- III. Commercial: As retail.

### 3.3 Workers Profile of Bakolia

Total working population of Bakolia master plan area is 2587 which are either main or marginal workers. Total workers in the town/city are 1176 out of which 599 are male and 577 are female. Total main workers are 1578 out of which male main workers are 1157 and female main workers are 421. Total marginal workers of Bakolia are 1009 persons.

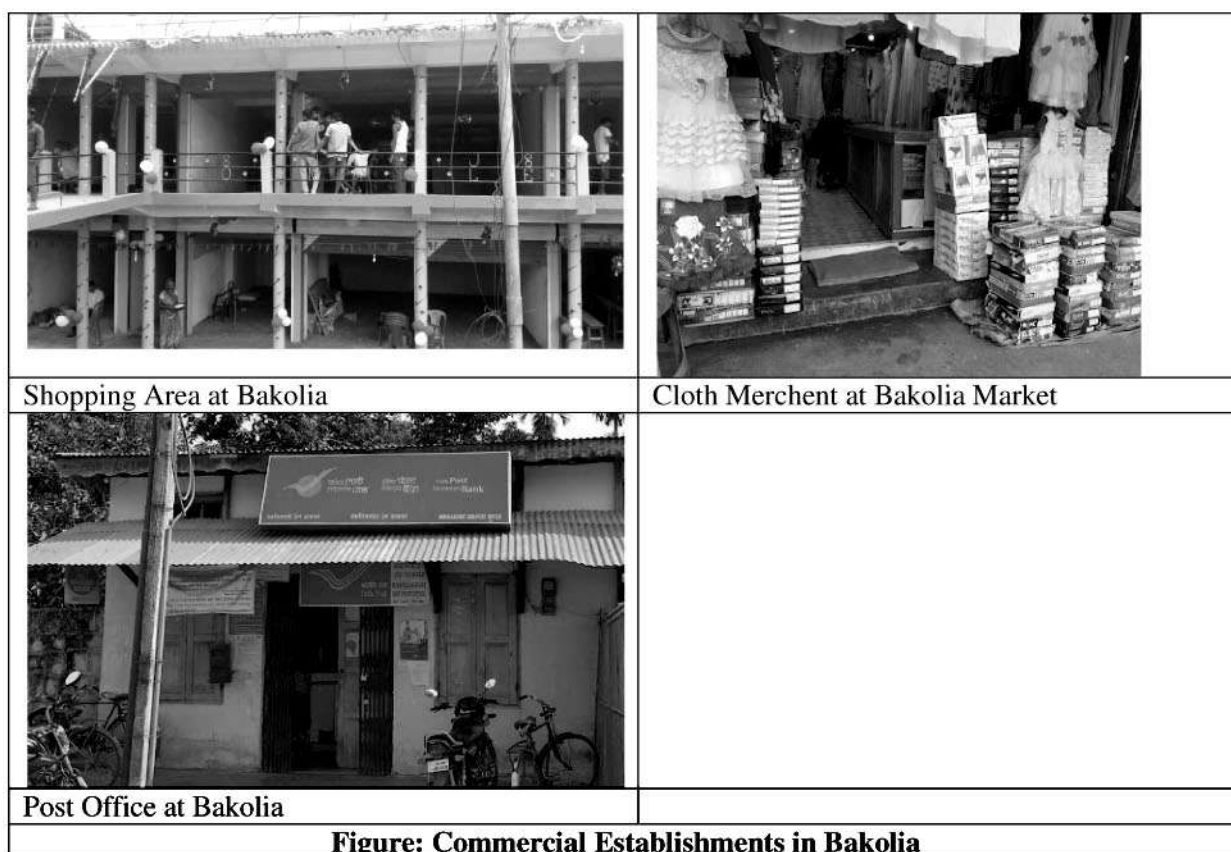
<b>Table 3.1 Bakolia Master Plan Area Working Population ---Census 2011</b>			
<b>Name</b>	<b>Total</b>	<b>Male</b>	<b>Female</b>
<b>Total Workers</b>	<b>2587</b>	<b>1688</b>	<b>899</b>
Main Workers	1578	1157	421
Cultivators	1077	764	313
Agricultural Labour	74	36	38
Household Workers	412	349	63
Other	3920	1601	2319
<b>Non Worker</b>	<b>3920</b>	<b>1601</b>	<b>2319</b>

### 3.4 Formal Sector

The town has organized service sector like education (primary, secondary and college), health (Public and Private clinic), Banks (commercial and Gramin) and Restaurants and Petrol Pumps. These are the only formal sector jobs available in the urban area, Bakolia is recognised by the Government of Assam as one of the Industrial Growth Centre in the Karbi Anglong district.

<b>Table 3.2: Existing Industrial Infrastructure in Karbi Anglong District</b>					
<b>Name of the Industrial Infrastructure</b>	<b>Total area ( Sq mtr)</b>	<b>Open Space (sq mtr)</b>	<b>Shed/s ( no)</b>	<b>Available open space Sq mtr)</b>	<b>Available Sheds (No)</b>
<b>Karbi Anglong</b>					
Growth Centre, Bokulia	803	580	2	0	0
Commercial Estate, Bakolia	535	435	4	0	0





### 3.5 Informal Sector

The town is extensively dependent on the shops and establishments in the market areas in the main areas as well as the villages adjacent to the town. The shops now regarded as MSME employ the majority of the youth who wish to practice non-agricultural occupation. The town has informal selling of vegetables and daily consumptions items in the markets held daily at the town and weekly at different locations of the urban areas mainly villages.



**Daily Market, Town Committee, Bakolia**

### 3.6 Occupational Pattern

The Town Area has more people engaged in non-agricultural activities, but in the town we have about 65 percent of the working population also engaged in the agriculture as main occupation. Majority of the female workers are engaged in the service sector in the city.

About 20 percent of the workforce are working as marginal workers in the city, the farming population in the villages of the urban areas are engaged also in the non-agricultural activities. The daily commuters from the neighbouring villages have increased and town market activities have improved during last five years.

<b>Table3.3 : Occupation Pattern in the Bakolia Urban Area</b>										
Name	Bakolia	Nam Bokulia- 1,2	Pup- Sikarighat Dimasa	Barai Tisso	Udali Gaon 1,2	Henru Abi-1	Bukulia Ghat	Era Gaon	Dhan Sing Ronghang	Total UA
TOT_WORK_P	1176	484	74	0	585	50	88	86	44	2587
TOT_WORK_M	599	343	66	0	459	36	86	78	21	1688
TOT_WORK_F	577	141	8	0	126	14	2	8	23	899
MAINWORK_P	723	332	55	0	321	44	11	72	20	1578
MAINWORK_M	409	299	47	0	273	32	10	68	19	1157
MAINWORK_F	314	33	8	0	48	12	1	4	1	421
MAIN_CL_P	688	184	50	0	43	26	0	66	20	1077
MAIN_CL_M	397	174	45	0	42	22	0	65	19	764
MAIN_CL_F	291	10	5	0	1	4	0	1	1	313
MAIN_AL_P	21	20	0	0	18	11	0	4	0	74
MAIN_AL_M	9	6	0	0	13	7	0	1	0	36
MAIN_AL_F	12	14	0	0	5	4	0	3	0	38
MAIN_HH_P	4	3	1	0	5	2	0	0	0	15
MAIN_HH_M	0	3	0	0	4	1	0	0	0	8
MAIN_HH_F	4	0	1	0	1	1	0	0	0	7
MAIN_OT_P	10	125	4	0	255	5	11	2	0	412
MAIN_OT_M	3	116	2	0	214	2	10	2	0	349
MAIN_OT_F	7	9	2	0	41	3	1	0	0	63
NON_WORK_P	1026	741	198	0	1146	228	275	243	63	3920
NON_WORK_M	536	263	77	0	418	94	90	88	35	1601
NON_WORK_F	490	478	121	0	728	134	185	155	28	2319

The majority of the other workers than agriculture are engaged in the Udali Gaon. The Bakolia town also have large number of the people engaged in the non-working population category.

<b>Table 3.4: Distribution of Marginal Workers in Urban Area – Bakolia Town</b>											
Name	Northern Range Bakolia (Kaki)	Nam Bokulia-1,2	Pup-Sikarighat Dimasa	Barai Tisso	Udali Gaon 1,2	Henru Abi-1	Bukulia Ghat	Era Gaon	Kania Hanse	Dhan Sing Ronghang	Total UA
MARGWORK_P	453	152	19	0	264	6	77	14	0	24	1009
MARGWORK_M	190	44	19	0	186	4	76	10	0	2	531
MARGWORK_F	263	108	0	0	78	2	1	4	0	22	478
MARG_CL_P	109	44	1	0	143	5	50	2	0	0	354
MARG_CL_M	39	13	1	0	132	4	50	2	0	0	241
MARG_CL_F	70	31	0	0	11	1	0	0	0	0	113
MARG_AL_P	319	92	5	0	73	1	0	12	0	24	526
MARG_AL_M	142	17	5	0	30	0	0	8	0	2	204
MARG_AL_F	177	75	0	0	43	1	0	4	0	22	322
MARG_HH_P	13	0	9	0	6	0	0	0	0	0	28
MARG_HH_M	2	0	9	0	4	0	0	0	0	0	15
MARG_HH_F	11	0	0	0	2	0	0	0	0	0	13
MARG_OT_P	12	16	4	0	42	0	27	0	0	0	101
MARG_OT_M	7	14	4	0	20	0	26	0	0	0	71
MARG_OT_F	5	2	0	0	22	0	1	0	0	0	30
MARGWORK_3_6_P	435	151	18	0	209	6	15	14	0	24	872
MARGWORK_3_6_M	181	44	18	0	139	4	15	10	0	2	413
MARGWORK_3_6_F	254	107	0	0	70	2	0	4	0	22	459
MARG_CL_3_6_P	100	44	1	0	102	5	6	2	0	0	260
MARG_CL_3_6_M	34	13	1	0	93	4	6	2	0	0	153
MARG_CL_3_6_F	66	31	0	0	9	1	0	0	0	0	107
MARG_AL_3_6_P	311	91	4	0	67	1	0	12	0	24	510
MARG_AL_3_6_M	139	17	4	0	27	0	0	8	0	2	197
MARG_AL_3_6_F	172	74	0	0	40	1	0	4	0	22	313
MARG_HH_3_6_P	12	0	9	0	3	0	0	0	0	0	24
MARG_HH_3_6_M	1	0	9	0	3	0	0	0	0	0	13
MARG_HH_3_6_F	11	0	0	0	0	0	0	0	0	0	11
MARG_OT_3_6_P	12	16	4	0	37	0	9	0	0	0	78
MARG_OT_3_6_M	7	14	4	0	16	0	9	0	0	0	50
MARG_OT_3_6_F	5	2	0	0	21	0	0	0	0	0	28
MARGWORK_0_3_P	18	1	1	0	55	0	62	0	0	0	137
MARGWORK_0_3_M	9	0	1	0	47	0	61	0	0	0	118
MARGWORK_0_3_F	9	1	0	0	8	0	1	0	0	0	19
MARG_CL_0_3_P	9	0	0	0	41	0	44	0	0	0	94
MARG_CL_0_3_M	5	0	0	0	39	0	44	0	0	0	88
MARG_CL_0_3_F	4	0	0	0	2	0	0	0	0	0	6
MARG_AL_0_3_P	8	1	1	0	6	0	0	0	0	0	16
MARG_AL_0_3_M	3	0	1	0	3	0	0	0	0	0	7
MARG_AL_0_3_F	5	1	0	0	3	0	0	0	0	0	9
MARG_HH_0_3_P	1	0	0	0	3	0	0	0	0	0	4

MARG_HH_0_3_M	1	0	0	0	1	0	0	0	0	0	2
MARG_HH_0_3_F	0	0	0	0	2	0	0	0	0	0	2
MARG_OT_0_3_P	0	0	0	0	5	0	18	0	0	0	23
MARG_OT_0_3_M	0	0	0	0	4	0	17	0	0	0	21
MARG_OT_0_3_F	0	0	0	0	1	0	1	0	0	0	2

### 3.7 Economic Activity

#### Rice Mill

The town has traditional and modern rice processing areas. The rice mill located on the main road services the region during the season. The rice mill processes the paddy during the season the provides employment to at least 20 different people.



**Figure: Rice Mill, Main Road (AH), Bakolia**

#### Pradhan Mantri Kaushal Kendra Bakolia

The town has recently supported by the Pradhan Mantri Kaushal Kendra. The training provided under the central government program includes skilling the people. The training on the solar products, stitching and other items are underway to improve the skills of the people.



Pradhan Mantri Kaushal Kendra (PMKK) centers are state-of-the-art, visible, and aspirational model training centers that have been created in every district of India, ensuring coverage of all parliamentary seats. PMKK is a Ministry of Skill Development and Entrepreneurship initiative to ensure the creation of a standardized infrastructure for the delivery of skill development training that is equipped to run high-quality industry-driven courses with a focus on employability and create an aspirational value for skill training. The goal of PMKK is to turn the short-term training ecology into a long-term institutional model.

### **3.8 Impact of Master Plan on Economic Activities of town.**

The proposal of the proposed master plan would invariably create a number of direct employment opportunities. However, indirect employment opportunities would also be generated which would provide great impetus to the economy of the local area. Various types of businesses, such as shops, food-stalls, tea stalls, restaurants, workshops, etc. would invariably come-up, which would be run by the more entrepreneurial local residents. Besides, a variety of suppliers, traders, transporters, service providers, etc., are also likely to concentrate here and likely to benefit immensely, as demand for almost all types of goods and services will increase significantly.

The business community as a whole would be benefited. The locals would also avail these opportunities arising from the master plan and increase their income levels. The proposal of the master plan will provide an impetus to the industrialization and urbanization in the area. Many of the agricultural lands or barren lands in the vicinity of the master plan area are likely to be put to non-agricultural uses. The master plan would require lot of ancillary developments like shops, restaurant, workshops, etc. which will have a significant impact on the existing land use of the area. Job opportunities will drastically improve in this area. At present most of the population sustains on agriculture and allied activities. There are no major industries or other avenues of occupation in the area. The master plan will open a large number of jobs to the local population during master plan proposal phase.

**Business opportunities**

Apart from direct employment, opportunities for indirect employment will also be generated which would provide great impetus to the economy of the local area. Various types of business like shops, food-stall, tea stalls, etc. besides a variety of suppliers, traders, transporters will concentrate here and benefit immensely as demand will increase significantly for almost all types of goods and services. The business community as a whole will be benefited. The locals will avail these opportunities arising from the master plan and increase their income levels. With the increase in the income levels, there will be an improvement in the infrastructure facilities in the area.



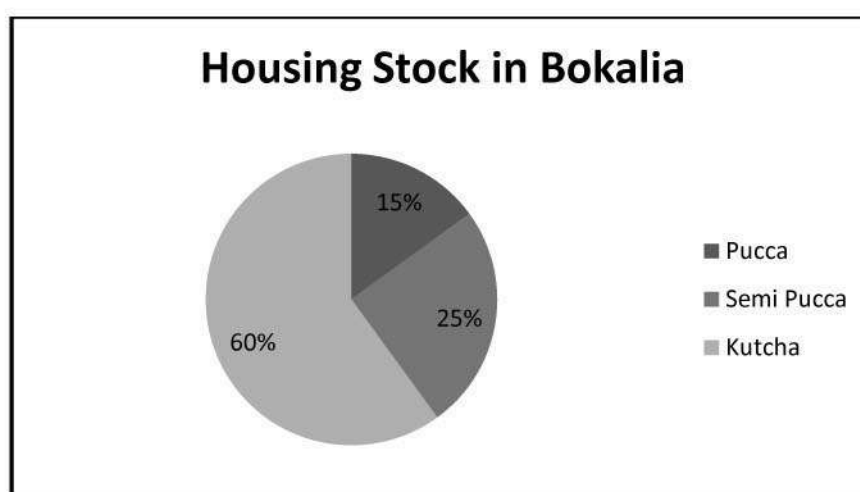
## Chapter 4: HOUSING AND SHELTER

Food, cloth and shelter are the basic needs of a human being. The Master plan should show the location of various types of uses, densities, yields, and lot sizes. When developing housing, a variety of housing types, sizes, and tenures must be considered. In this context, the Master plan should also ensure appropriate housing density and diversity. The Master Plan should also be flexible enough to allow for change over time in housing diversity as communities mature.

### 4.1 Housing Scenario

As per estimate, Bakolia Master Plan area includes 2744 houses. Based on current population, there is a lack of 550 numbers of houses in Bakolia Master Plan area. The town has 95 percent households living their owned houses. About 3.5 percent of the households are living in the rented houses. Their own self or hereditary except in the some of the habitations constructs the houses where there has been large influx of the migrants during last two decades.

<b>Table 4.1: Housing Stock in Bakolia</b>		
<b>Sl. No.</b>	<b>Type of house</b>	<b>Housing stock</b>
1	Pucca	188
2	Semi Pucca	313
3	Kutchha	751
	<b>Total</b>	<b>1251</b>



**Figure 4.1: Housing Scenario in Bakolia**

The Bakolia have traditional houses with semi-pucca structure of semi-public and public buildings, thatched houses with basic W/c area in the vicinity. Type of Houses Type of house is one of the major indicators of the quality of life of a community. Figure-2.5 shows that close to about one-fourth of the households are staying in a Pucca house. The definition of a Pucca house is the one that has permanent (RC) structure for all the three portions, namely, floor, walls and roof. Semi-pucca are those houses with two of the three portions made of permanent structure and the survey recorded that about one-third of such houses (semi-pucca). Obviously those house with only one of the three portions or mostly none are the Kuccha houses and it constituted the majority of the houses (44%). About 76% of the households have separate space for kitchen and 87% houses have toilets indicating a progressive sanitation behavior.

#### 4.2 Housing supply mechanism

The census tables can be summarised that the town has more semi-pucca houses constructed by the households themselves. A typical houses would have two rooms, indoor/outdoor cooking area and sitting for the outsiders.

<b>Table 4.2 Housing Scenario Master Plan Area (estimated)</b>		
<b>Sl. No.</b>	<b>Type of house</b>	<b>Housing stock (2022)</b>
1	Pucca	263
2	Semi Pucca	438
3	Kutchu	1051
	<b>Total</b>	<b>1752</b>

#### 4.3 Housing condition

The house structure is made of thatched materials, roof and walls uses more wood and thatched materials. The floor is mud or cement concrete in some of the places. The light houses are easy to dismantle and can have easy construction post disaster (as the region is mostly flood prone)

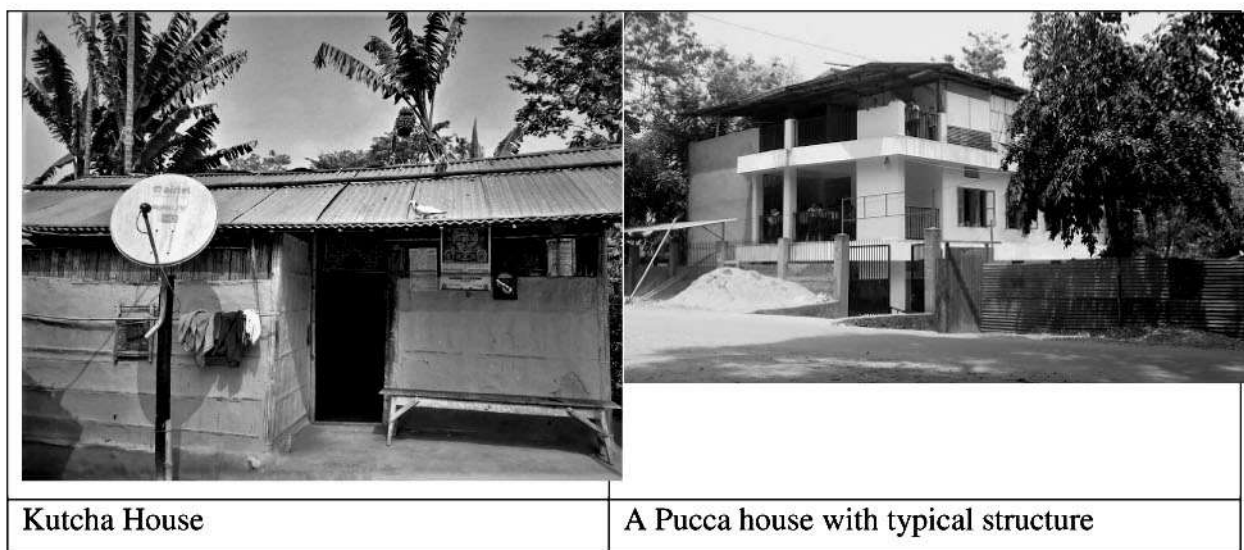
The open areas are found in the front and back of the houses. The typical small towns would have characteristics of the village wherein the houses also have kitchen garden, small ponds for rearing fish and hatcheries for hens and eggs.

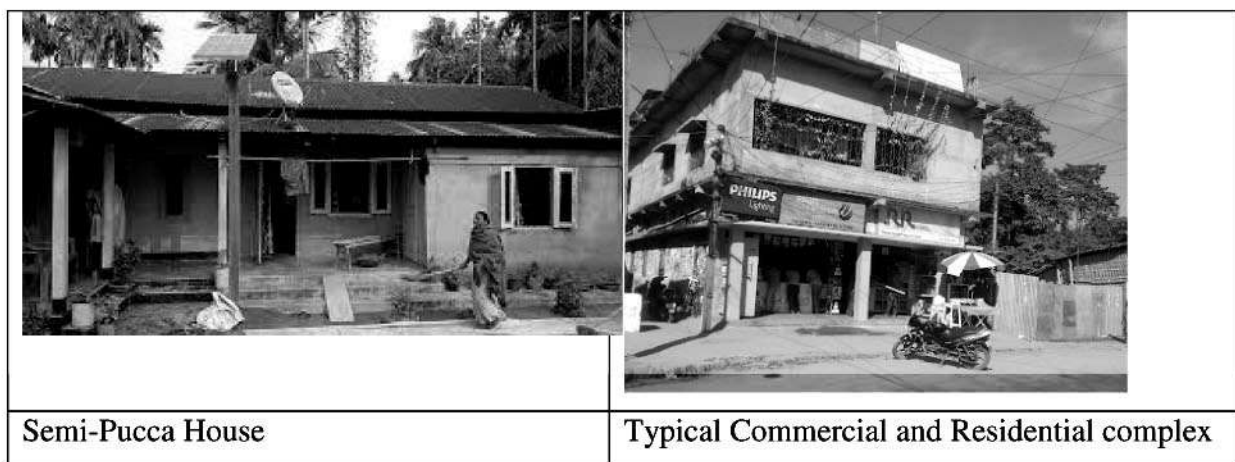
The town does not have any slum, but there are poor households and income of the households varies in the town. The rich households own large plot of the land and are organised along the main access routes of the town. The outsiders like merchants, financiers and governments officials have housed themselves near to the town centre.

The tribal population are also residing on the fringe of the town and villages surrounding the town, They supply the weekly and daily needs of the town with vegetables and other consumables. The education facilities in the town attracts the students from the villages.

The new construction in the towns uses modern materials but its only limited to 10 percent of the households. The areas require more improvement in the sanitation and drainage conditions. About 80 percent of the households have water connection in the town centre however many also have the hand pump and wells in the vicinity for drawing drinking and portable water.

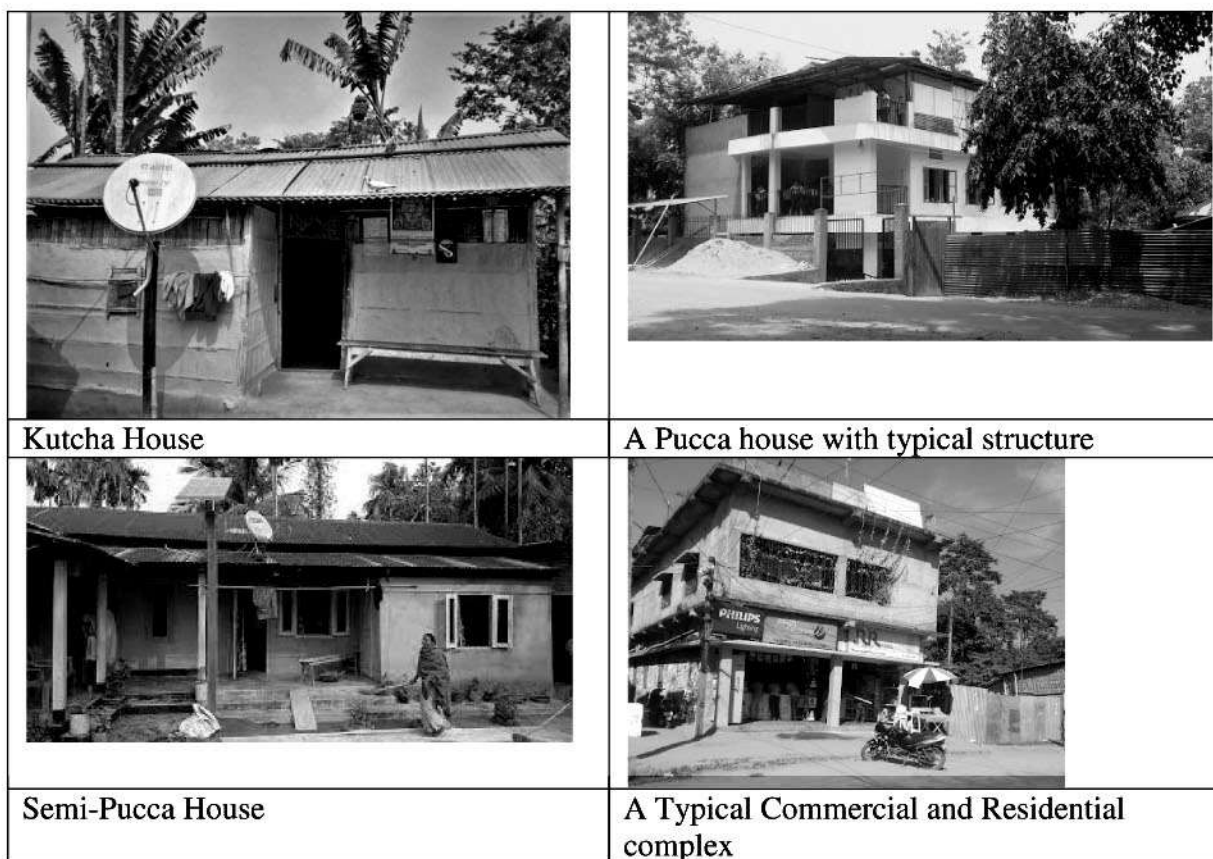
The homelessness in the town is very less and all the people have respectable housing units. The needs for the dormitories for the new migrants or travellers is required in the town to maintain the safety of the travellers.





**Figure 4.1 : Housing Typologies in the town areas**

While taking building permission it is necessary for the residents to make arrangement for water harvesting system.



**Figure 4.2: Housing Typologies in the town areas**

### 4.3 Improvement in the housing situation

The housing units in the urban and rural fringes of the town has been expecting improvement. The success of the Pradhan Mantri Awaas Yojna for urban and rural areas have helped households to get respectable housing units.



**Figure 4.3: A Typical PMAY Unit**

The housing unit typically to be under the single or joint ownership with the women head of households is the bold step in the right directions. The town has been constructing the houses, and block development office in the town has been listing beneficiaries for the projects.

#### **4.4 PAMY Progress**

The town has been approved for 700 houses under the Pradhan Mantri Awaas Yojna, which mainly covers the poor family. The standard approved designs have been adopted for the houses in town.

The master plan has proposed some of the areas for the rehabilitation and relocation of the houses which are in the flood prone regions, homeless and destitutes for providing shelter. A project for providing hundred houses for such group would be initiated in the five different localities in the town.



**Figure 4.4: Typical Housing Typologies for the MIG/HIG housing.**



**Figure 4.5: A typical cluster for the town area for the high density low rise development**

## Chapter 5: TRANSPORTATION

### 5.1 Network of Roads

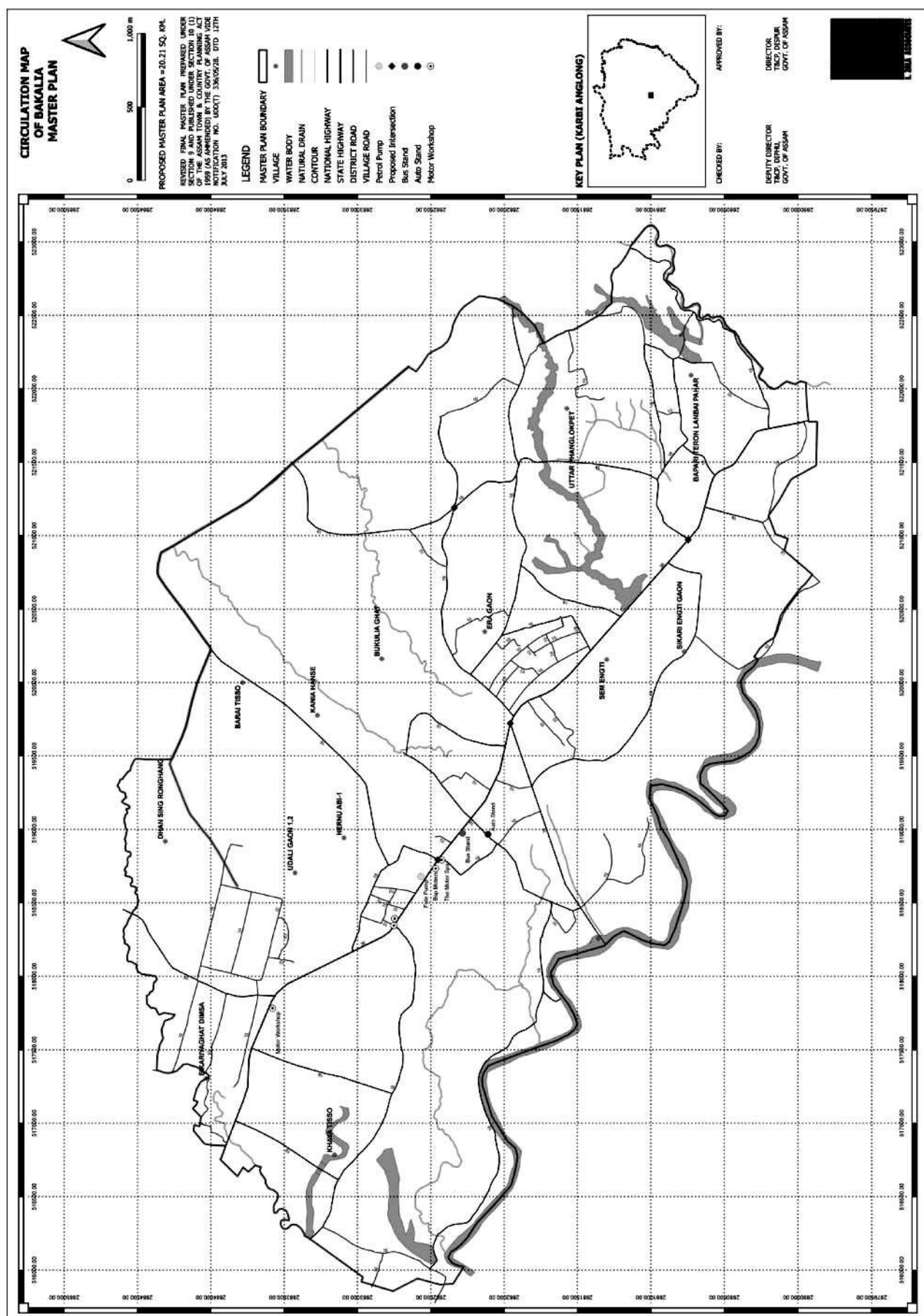
Roads are divided into three segments viz. primary road, secondary road & tertiary road. Bakolia is well connected with National Highway-36, which passes through the Master Plan area. The width of the primary roads is 10m-15m. Now-a-days different bus services link the area with the other places within the state and country. Tertiary roads are the local roads/streets within the residential areas/ semi-public areas etc. where width of roads is 4m-6m. These internal roads are covered by PWD. The nearest railway station is at Lanka, 28 km away from Bakolia. N. F. rail communication also makes the area easily accessible from various parts of the region. However, the transport and communication is yet to develop in the district including the Master Plan area of Bakolia.

#### 5.1.1 Existing Road Network

The master plan area had approximately 64.2 km length comprising of Nation Highway/Asian Highway no 2(AH2) -6.78 km, District road about 33.7 kms and 23.72 kilometers of the local roads. The region has developed all the roads for the accessibility however there is need to improve the carrying capacity of the roads.

<b>Table 5.1: Bakolia Existing Road Network</b>			
<b>Sl. No</b>	<b>Type</b>	<b>Width</b>	<b>Length in km</b>
1	National Highway	36	6.78
2	State Highway	36	0
3	District Roads	20	33.7
4	Local Roads	10	23.72
	<b>Total</b>		<b>64.2</b>







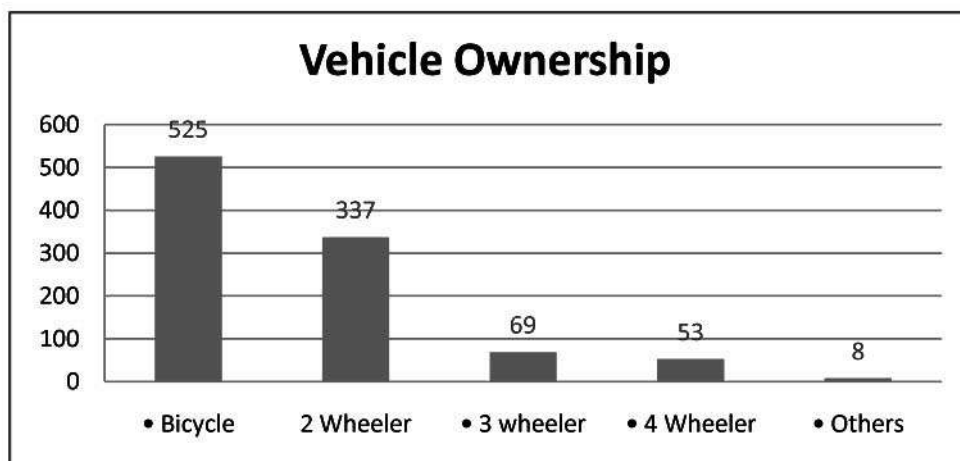
## 5.2 Modes of Transportation

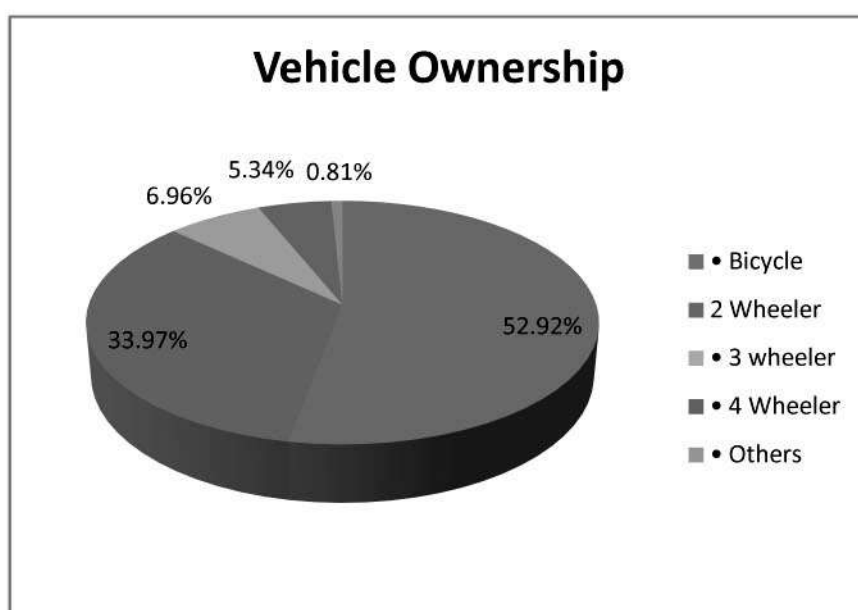
Roads and Railways are the primary means of transportation in this region. Karbi Anglong Autonomous Council Transport buses ply at regular interval to other important cities of the state. Private Taxi, Auto-rickshaw, Rickshaw, E-rickshaw are used as Intermediate modes of transportation.

## 5.3 Vehicle Ownership

Vehicle ownership details help to plan and fund improvements to road and highway infrastructure, develop transportation plans and services, understand the preferable mode of transportation, evaluate pollution and access to transportation in emergencies. The availability of the following modes of transport - Bicycle, Scooter/Motorcycle/Moped, Auto-rickshaw/rickshaw and Car/Jeep/Van was ascertained. As per estimates, only 40% of household in Bakolia Master Plan area have access to vehicle ownership. Out of the 40%, 52.8% is bicycle/tricycle for disabled person, 33.2% is two wheeler i.e. motor cycle/scooter/moped, 8% is three wheeler, i.e., Auto- rickshaw/ van/rickshaw, 6% is four-wheeler, 1% is others including bus/truck etc.

Table 5.1: Vehicle Ownership			
Sl. No.	Type of Vehicle	Nos. of Vehicle	P.C
1	Bicycle	525	52.92%
2	2 Wheeler	337	33.97%
3	3 wheeler	69	6.96%
4	4 Wheeler	53	5.34%
5	Others	8	0.81%
	<b>TOTAL</b>	<b>992</b>	<b>100.00%</b>





#### 5.4 Road Typology

Black top, Sand gravel, Earthen, Pavers block type of roads are seen within the Master plan area of Bakolia. The Road generally divided into 3(three) types -Primary road [ roads linked with National Highways and are maintained by Central Public Works Department(CPWD)], Secondary (Feeder Road), and Tertiary [Rural Roads consisting of District Roads(ODR) and Village roads].The Town is served by one National Highway (NH-36) and one State Highway (SH-19).

#### 5.5 Transportation Amenities

At present, there is no bus terminal within the Bakolia Master Plan Area. One bus terminal is proposed near SH -19. Roadside parking is seen all around the master plan area. This reduces the capacity of the roads and creates congestion within the town. There is lack of street signage and should be incorporated in the proposed master plan for better navigation.

The traffic junctions, rotary are neither adequate nor functioning well, because of which traffic congestion happens and needs a proper planning. rotary development in proposed at four (4) locations within the master plan area and the rotary at the junction of Primary (SH-19) and Secondary Road near is proposed to improvement. No designated parking is available within the area.

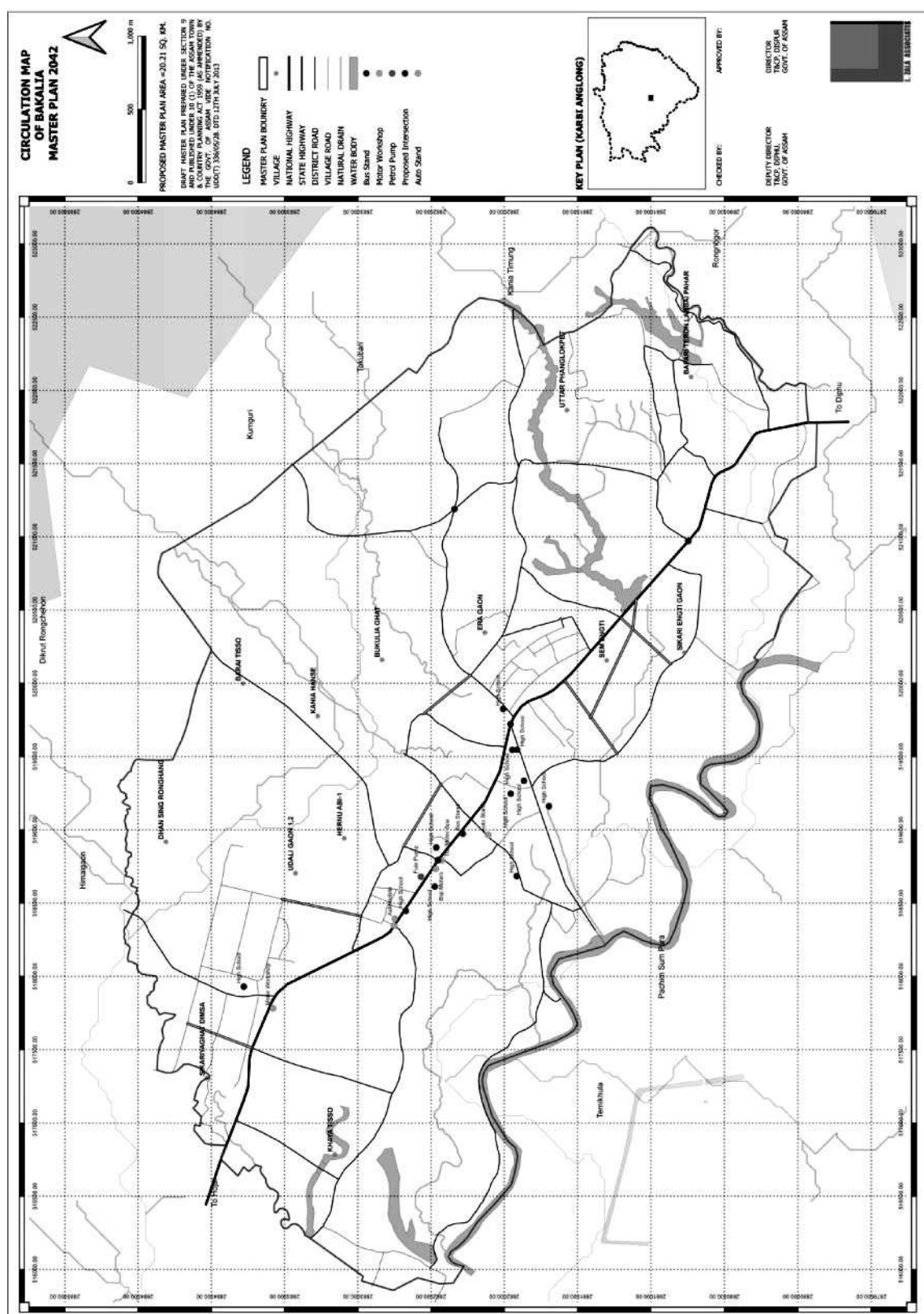
The on-street parking making the roads narrower. Only parallel parking to be permitted for on-street parking on the carriage way with parking spaces clearly defined by lane markings. Parking on public space anywhere in the city at any time, by any mode, needs to be charged a

price. The objectives of pricing are to (i) generate revenues, (ii) provide employment, especially poor, (iii) restrain demand, (iv) promote PMT, (v) encourage private sector investment, and (vi) rationalize parking duration.

### 5.7 Proposed Road Network

The region has developed all the roads for the accessibility however there is need to improve the carrying capacity of the roads. The master plan area has been proposed to improve the road condition by undertaking widening of the road Right of Way (RoW) for approximately 68.1 km length comprising of State Highway, District road of proposed 30 m and 24 m RoW for about 15.94 kms and 7.82 kilometres respectively. The number of the local roads needs strengthening which can be carried out for 37.56 kms length after detailed feasibility report.

<b>Table 5.2: Bakolia Proposed Road Network</b>			
Sl. No	Type	Width	Length in km
1	National Highway	45	6.78
2	State Highway	45	0
3	Proposed Road 30m	30	15.94
4	Proposed Road 24m	24	7.82
5	No Change		37.56
	<b>Total</b>		<b>68.1</b>



## **Chapter 6: INFRASTRUCTURE, PUBLIC UTILITIES & SERVICES**

This is the bottom level category of all towns' hierarchy of the region. There were only six towns in this category in 2001 and in 1991 no town falls in this category. Most of the towns belonging to this category poorly accessible and have a very low level of socio-economic infrastructural facility.

The development in infrastructural facilities (civic, educational, medical, and cultural facilities) between 1991 and 2001 has been more in small and medium towns, probably due to the increasing demand of growing population. The future development of Assam depends primarily on this category for the location of policy and non- policy central functions for rapid urban transformation of this region.

### **6.1 Local Employment Opportunities**

The operation of the master plan will provide an impetus to the industrialization and urbanization in the area. Many of the agricultural lands or barren lands in the vicinity of the master plan area are likely to be put to non-agricultural uses. The master plan would require lot of ancillary developments like shops, restaurant, workshops, etc. which will have a significant impact on the existing land use of the area. Job opportunities will drastically improve in this area. At present most of the population sustains on agriculture and allied activities. There are no major industries or other avenues of occupation in the area. The master plan will open a large number of jobs to the local population during master plan operation phase.

#### **Governmental service enhancement opportunities**

After completion of construction phase, there will be upgradation of local services like education, drinking water, health post and other social governmental services like security, bank, finance etc will increase at and around the master plan sites. Government will provide different services to the master plan, which will automatically help locals.

## 6.2 Physical Infrastructure

Physical infrastructure planning and management for sustainable development of the small town in the region having urban agglomeration attracts the migrants. The development of infrastructure would regulate the current development in the town and help in boosting the economic and social well being of the people.

### 6.2.1 Water supply

#### Water Supply Status (Jal Jeevan Mission)

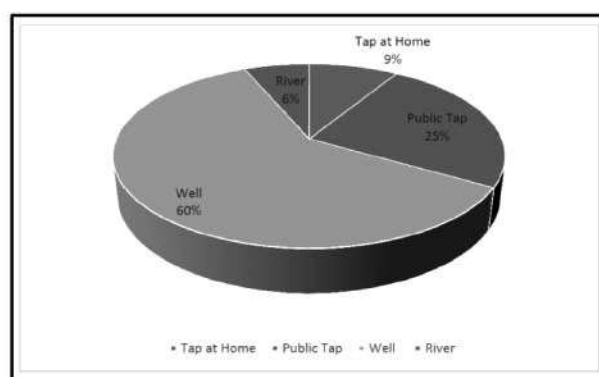
*Jal Jeevan Mission*, the most ambitious project of Prime Minister Shri Narendra Modi will benefit around two million people of Assam. This mission will ensure pure and safe water in households. The Department of Drinking Water and Sanitation under the Ministry of Jal Shakti, will implement the project within 2024.

Table 6.1 Karbi Anglong- Water Supply		
GW resource dynamic (MCM)	Utilizable GW resource for irrigation (MCM)	Utilizable GW resource for drinking and allied (MCM)
584	496	88
Total Habitations	SC Habitations	ST Habitation
3530	149	3155
WS Percent Access	65	72

In Karbi anglong, the existing schemes will be renovated and made functional under the new initiative. Around 82 existing schemes will be revived in two stages under Jal Jeevan Mission (JJM). Bakolia PHE Division and Diphu PHE (Rural Division) will activate 80 schemes under JJM in the first and second phase, and shall cover around 23,000 households within March next year. New schemes will cover villages where no water supply schemes existed and within December 2024, the entire population of Karbi Anglong will be covered.

<b>Table 6.2: Village wise percentage FHTC coverage( Reported Till 03/05/2022 )</b>						
<b>State : ASSAM, District : Karbi Anglong</b>						
<b>Sl.No.</b>	<b>Block</b>	<b>No. of Villages with PWS</b>				
		<b>Nos. of Villages with (100% FHTC)</b>	<b>Nos. of Villages with &gt;= 90 to &lt; 100 % FHTC</b>	<b>Nos. of Villages with &gt;= 80 to &lt; 90 % FHTC</b>	<b>Nos. of Villages with &gt;= 70 to &lt; 80 % FHTC</b>	<b>Nos. of Villages with &lt; 70 % FHTC</b>
1.	BAKOLIA	90	12	11	6	109
2.	SAMELANGSO	50	10	3	1	122
3.	LUMBAJONG	33	0	1	5	82
4.	NILIP	24	1	3	0	55
5.	RONGMONGWAY	22	0	0	2	35
6.	LANGSOMEPI	21	2	2	1	76
7.	BOKAJAN	21	4	3	7	102
	<b>Total</b>	<b>261</b>	<b>29</b>	<b>23</b>	<b>22</b>	<b>581</b>
<b>Source: Reports (ejalshakti.gov.in) , 2022</b>						

About two-third of surveyed households draw water from the well within the village. About one-fourth of the households and having access to public tap water, while another 9% have water tap at home. The remaining 6% of the households have said that they access the river for their need for water. The details are given in Figure



### 6.2.2 Drainage system

There are very few formal drainage system in non-classified towns. Most of the drains are natural and primarily use for irrigation of the paddy fields in the town and its vicinity. The current drainage system in the town is open and prone to blockage due to dumping of the waste near the town centre



The town has open drains in the market and institutional areas, most of the drainage is sufficient for the current population load in the system. However, a total plan and feasibility report for the drainage system would be required for making the drainage system underground.

As per the PHE standards the housing areas with more densities are required to have better coverage currently this coverage varies from 40 to 60 percent of the residential areas and 70 percent in the commercial areas.

### **6.2.3 Sanitation**

About 80 percent household were having access to the sanitation facility in the Dokmoka town. The SBM efforts in the block has resulted in improvement in the sanitary conditions.

The public urinals and W/C is lacking the market areas and general sanitary conditions have depleted over the years. As per the discussion with the Dokmoka town committee members its desirable to upgrade the sanitary condition in the public areas.

Lack of the sanitary condition has also led to increase in the water and air borne diseases reflecting the need for improvement in the sanitary services in the town and rest of the proposed urban area.

### **6.2.4 Sewerage network**

The class VI town has very low probability of Sewerage network, however the high density area can start laying the lines along the major road to facilitate the movement of sewerage.

A detailed feasibility report and survey would be needed to cover initial 80 percent of household in the town areas. Regular de-siltation of existing soak pit and services of the municipal services can be improved for the town.

### **6.2.5 Solid waste management:**

#### **Current Practice**

The old practice is continued i.e. MSW collected from road side bins provided at different locations by Practically no proper segregation of waste is practiced in the State of Assam Truck, Tractor, Thellias and taken into the dumping ground. Towns are now provided with vehicles and bins for enhancing the practice.

#### **Future Action**

- The town shall be free to choose the technology for SWM projects, toilets and street sweeping. The KAAC shall, from time to time, bring to the notice of the

towns, through advisories and manuals, and other consultative mechanisms, various options available in these fields.

- Towns must contribute a minimum of 25% funds for SWM projects to match 75% KAAC Share (75 % of fund can also be sourced from state and central government).
- ULBs are advised to use system for formally procuring all waste management equipments, Additionally, ULBs are advised to procure decentralised composting machines directly from the National Seeds Corporation of India, a Government of India PSU.
- ULBs are advised to distribute color coded bins 2 bins per household), such that waste is segregated at source itself. The recommended colors are Green Bin for Wet Waste (ex: biodegradables), Blue Bin for non-biodegradable and other kinds of waste. Extra care must be taken for disposal of hazardous waste such as batteries, medical waste, etc.

#### **Site Identification**

The town committee has identified the site for the SWM disposal and processing, however the development of the site, compliance of the people for the waste segregation would be required. The financial and technical capacities of the town and local body must be enhanced to encourage compliance of SWM standards.





#### **6.2.6 Electric sub-station and major transformers**

Electricity consumption per capita in Assam is one of the lowest in the country. The growth of electricity supply and consumption in Assam has recently picked up after HEP project in the Karbi Anglong District. ASEB is committed to complete the long languishing run of the river (ROR) 100 MW Karbi Longpi Hydro Electric Power Project. The per capita electricity supplied is a mere 116 kwhr/person/year. This is only one fourth of the all India per capita generation of 479 kwhr. The town with minimal power requirement would be met by the ASEB. Sufficient land is available for enhancement of electric substation.

### 6.3 Social Infrastructure

Based on the Population of Baithalangso Master Plan area, as per URDPFI guidelines, it needs to have the basic social amenities like Senior Secondary School(VI to XII) of 1-2 nos. (1.8 ha), one number each of Dispensary (0.08-0.12ha), Community hall, mangal karyalaya, baaraat ghar/ library (2000 sqm), Neighbourhood park (1ha), Neighbourhood playground (1.5ha), Local shopping including service centre (4600sqm), Post office counter without delivery (85sqm), Bank with extension counters with ATM facility (81sqm). Accordingly, few community clubs are seen which is used as a community centre, although it is in dilapidated condition.

There is a requirement of community welfare centre of 0.1-0.15 ha serving a distance of 5-7km (as per UDPFI guidelines). A marriage hall of 2000 sqm (as per URDPFI guidelines) as community centre is proposed in the Master Plan. 4 Shopping Complexes (4600 sqm as per URDPFI guidelines) are proposed in Master Plan to cater to the commercial needs of the growing population. As per URDPFI guidelines, there is a need of 1 neighbourhood park of 1 ha and it is proposed in the Master Plan.

	
Irrigation Office, Bakolia	DMD IRRIG. BAKOLIA
	
Office of Block Committee, Bakolia	Rongnagar LP School



Bokalia CHC - Hospital



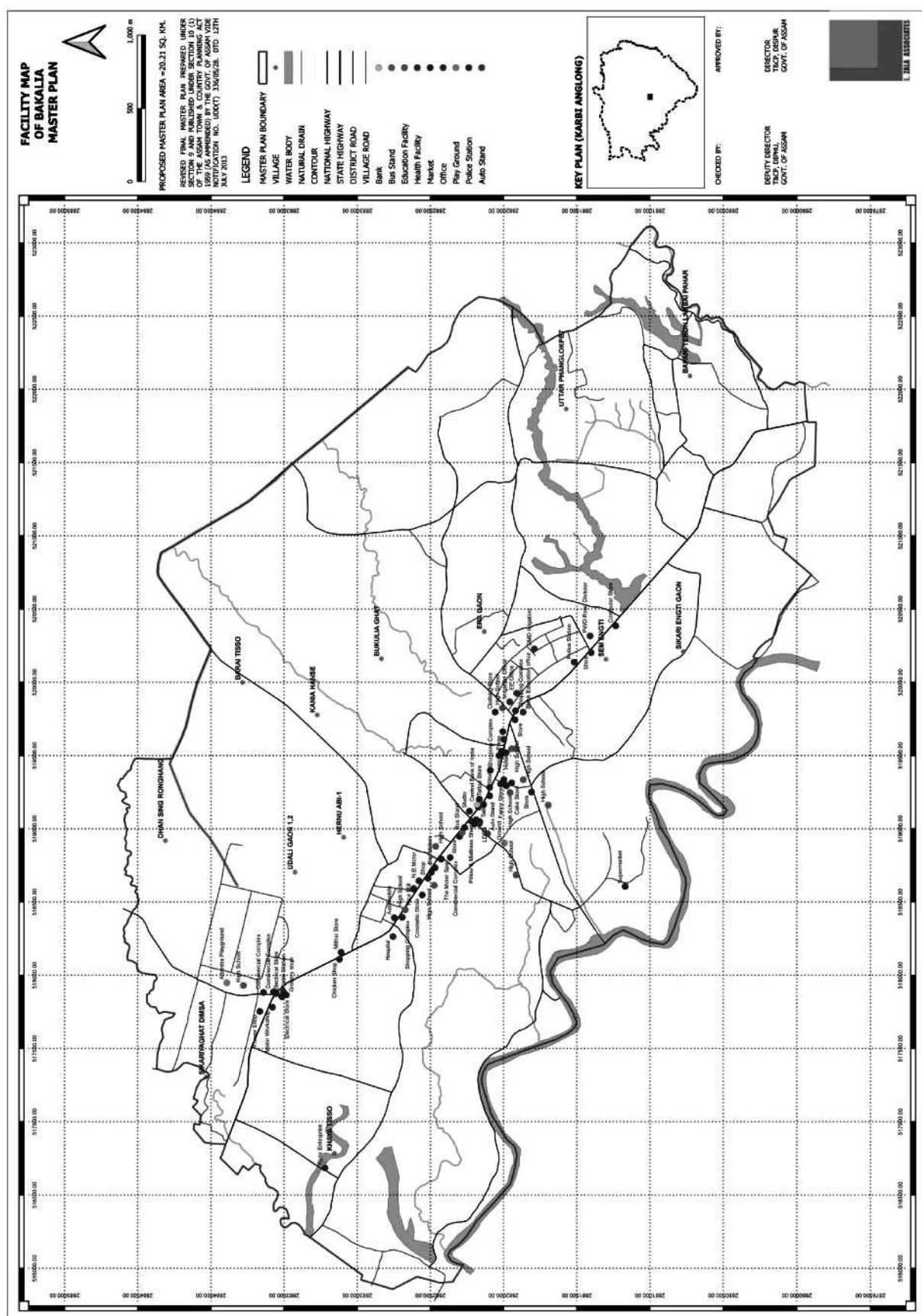
Civil Hospital (30 bedded), Bakolia



Rural Bank Office, Bakolia



নামঘৰজলসিঞ্চনকলনী, বকলিয়াঘাট, কাৰ্বিআংলং





## Chapter 7: ENVIRONMENT AND CITY BEAUTIFICATION PLAN

### 7.1 Development of Existing River Banks

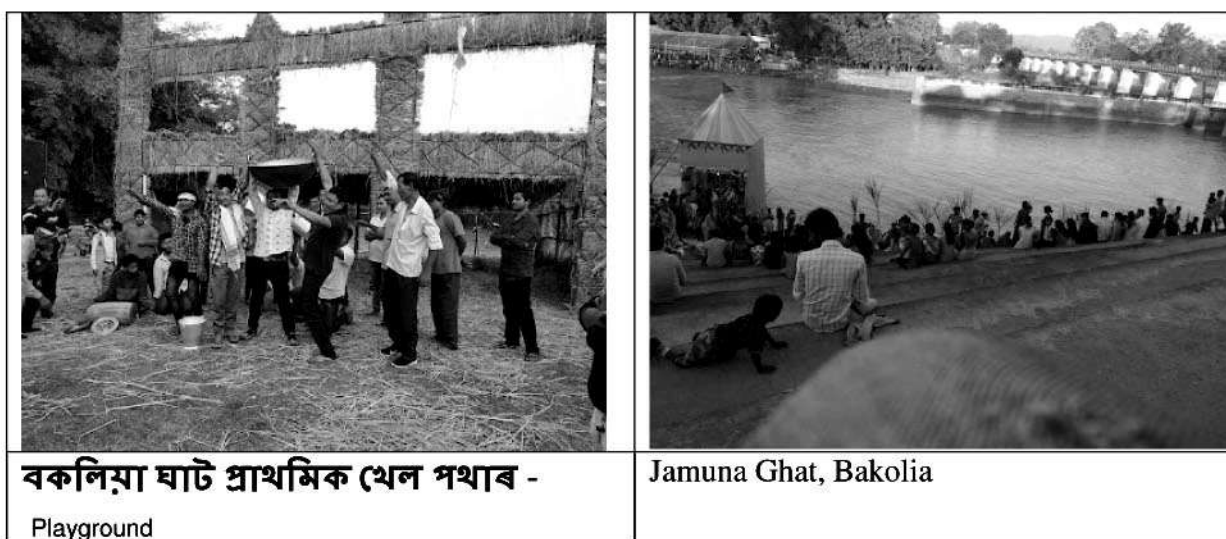
The town is now faced with deterioration of the river banks near the bridge area which is commercial and institutional areas. The flood protection structure has been damaged over the years and needs urgent repair or reconstruction in the town. The detailed feasibility report is suggested before undertaking the project. The state could take up this project, without having financial burden on the Municipal Board. The River and town side development project incorporating the protection, children park and informal shopping areas can be developed with basic amenities.

### 7.2 Protection of Forest or Social Plantation

The plan proposes to protect the forest and social plantation area from the development and restricts the movement of the people except for the educational and research purposes. The town committee along with the village leaders would identify the forest groves sacred for the community for protection. The traditional method of planting special trees, medicinal plants and other species would be encouraged.

	
Stadium /Play Ground Nr, Town Committee Office, Bakolia	Adarsha Play Ground

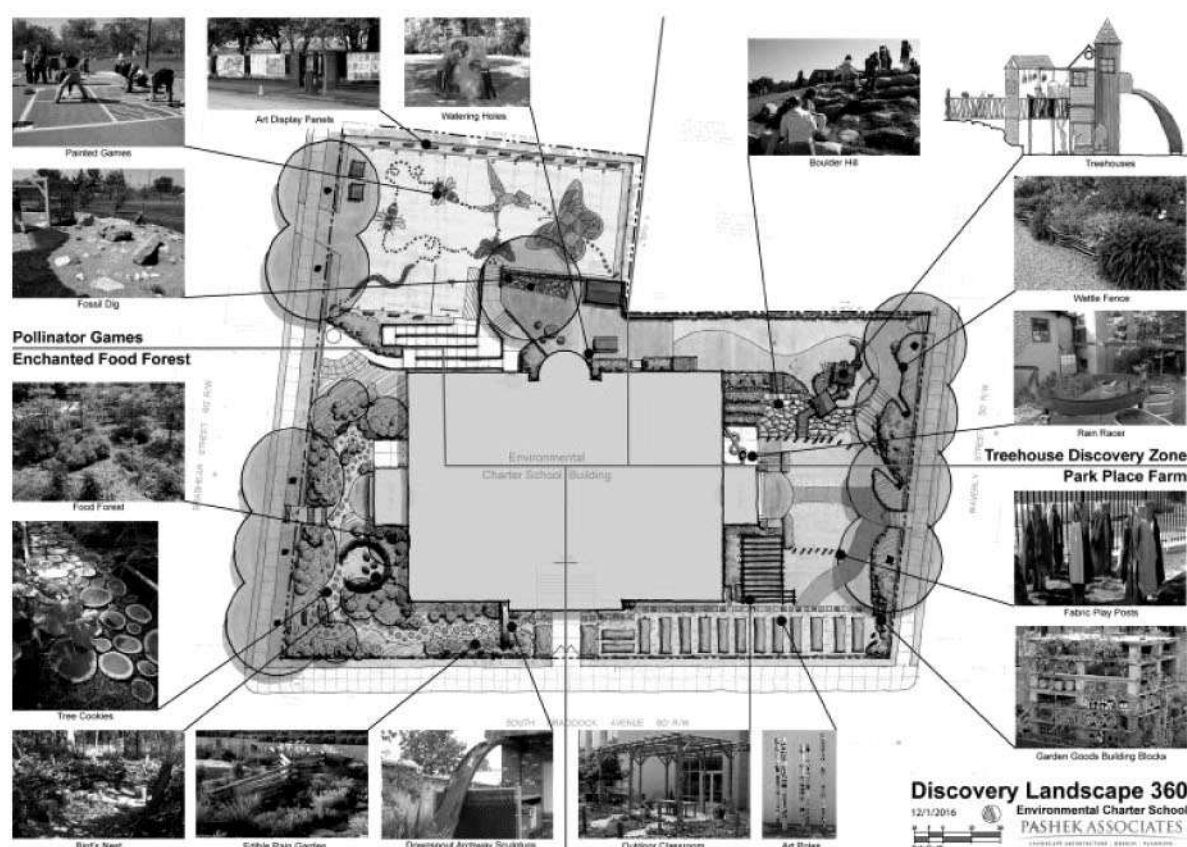




বকলিয়া ঘাট প্রাথমিক খেল পথাৰ -

Playground

Jamuna Ghat, Bakolia

**Need to Improve the School and Community Playground**

The town would be provided with some community based improvement projects along the major public areas. The land use proposed in the plan seeks to improve the access to the public areas, plantation of local varieties of flowers and vegetations along the current facilities. Community based partnership program would be developed to fund and allocate trained manpower to design the implement such projects.



Tentative cost for improvement for each playground and community places Rs. 65 Lakhs where town have more than three major and 10 minor areas. The community spaces along the junctions and major cross roads can be improved with more calming spaces using the local artisans and their works for display.

### 7.3 Market Area Redevelopment

The town centre would have amenities for not only daily commuters and market visitors but also for the children seeking recreation spaces. The part of the market area (15 percent) to be developed as the recreation or open gym spaces for the youth and children. The public utilities and rest rooms would be added in the main market under the supervision of the local town committee.



Figure 7.2: A Typical Improvement suggestions in Town



#### **7.4 Development of Tourist site on Master plan area**



**Chomna Aroi (River) - Tourist attraction**

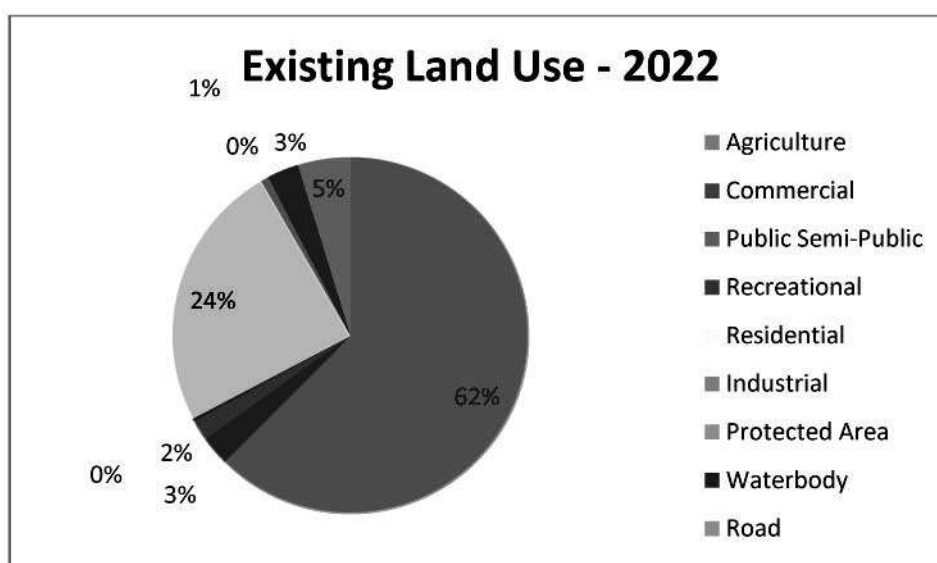
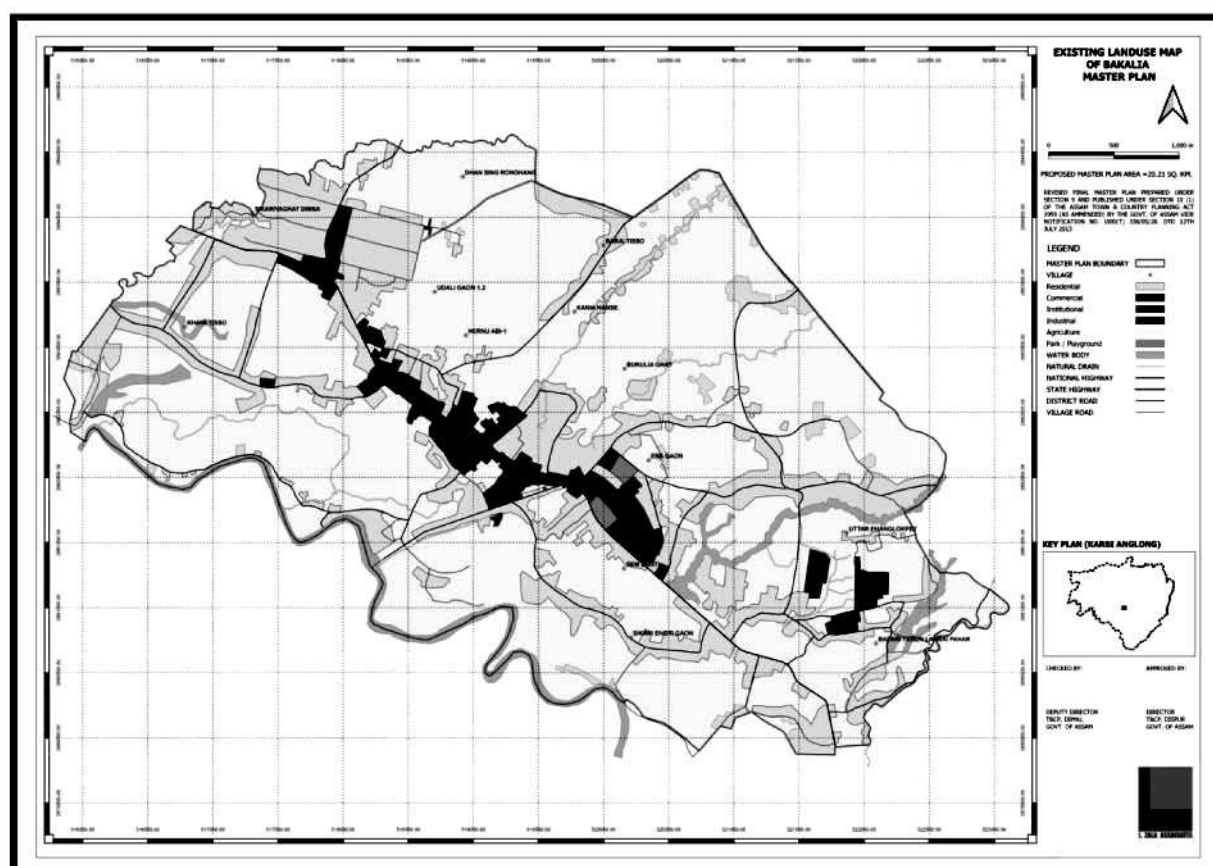
## VIII. CHAPTER 8: LANDUSE

Land use survey is to ascertain the existing land use pattern as well as to estimate the present and future need of the planning area. The planning concept and proposals that has been work out in the Final Master Plan for Bakolia are based on survey conducted. The preparation of the Master Plan is done based on estimation made for multifarious requirements upto 2042. The land use determines the inter relationship of functional activities. Various proposals have been proposed on the basis of the population projection. As per Bakolia Master Plan Data 2022, total Master Plan Area is 20.21 sq.km.

### 8.1 Existing Landuse

Based on survey in 2022, the existing landuse analysis shows that the primary landuse of the master plan area are 66.02 % agriculture and 22.37 % residential whereas the least is as 1.91% public and semi-public, 4.04% river and waterbody, and a 2.63% amount of commercial and park/playground. Therefore, to accommodate the physical and social infrastructure of the area the landuse distribution of the proposed master plan needs to be carefully handled.

<b>Table 8.1 Existing Landuse- Bakolia</b>		
<b>Landuse</b>	<b>Sq.km</b>	<b>Percent</b>
Agriculture	12.63	62.48
Commercial	0.53	2.63
Public Semi-Public	0.39	1.91
Recreational	0.05	0.27
Residential	4.93	24.38
Industrial	0.16	0.77
Protected Area	0.00	0.00
Waterbody	0.57	2.81
Road	0.96	4.77
<b>Total</b>	<b>20.21</b>	<b>100.00</b>

**Figure 8.1: Existing Land Use Analysis of Bakolia Master Plan Area (2022)****Figure 8.2: Existing Land Use Map of Bakolia Master Plan Area (2022)**

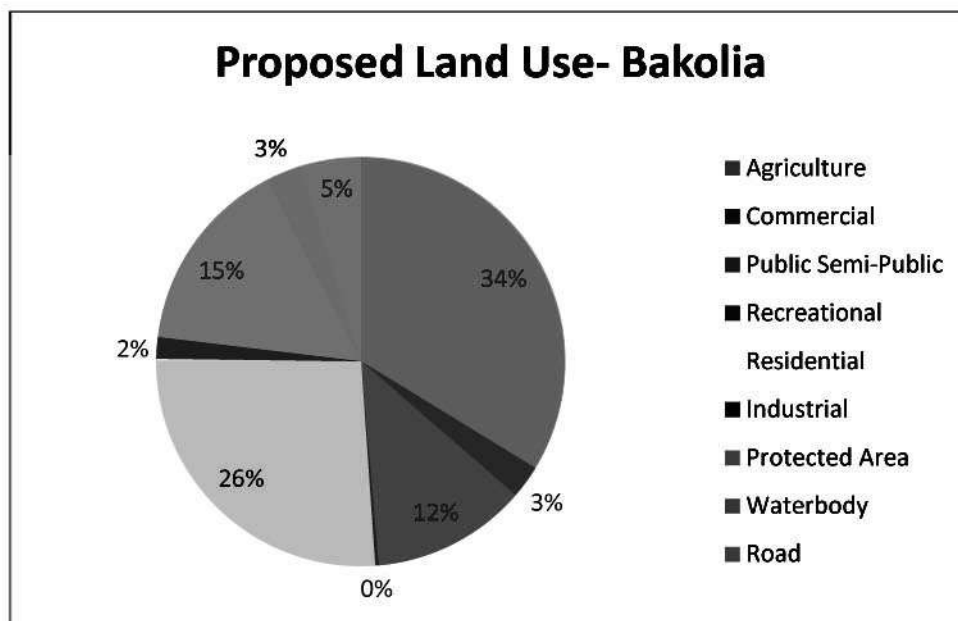
## 8.2 Proposed Landuse

In the proposed master plan, the residential area is increased by 20%, vacant land is decreased by 12%, 46% of agricultural landuse is converted to other landuse, Open space, Tea garden, Industrial are increased by 121.2%, and Public and Semi- public is increased by 2.1%.

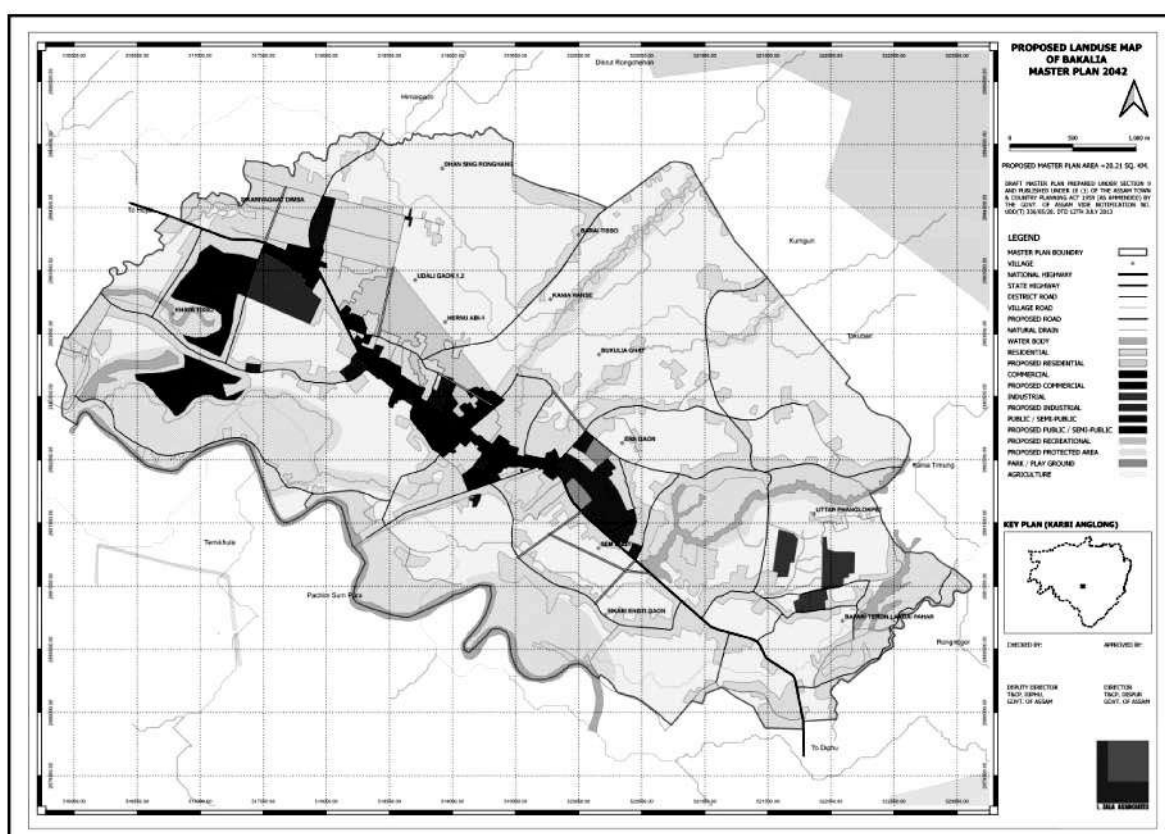
Hence based on these guidelines the following projects is proposed to develop socio cultural and commercial facilities viz- Bus Terminus, shopping complex Auditorium hall, Eco-friendly park, daily and weekly market, Truck Terminal, Harijan Colony and Housing for poor.

<b>Table 8.2Proposed Landuse- Bakolia</b>		
<b>Land Use</b>	<b>Sq.km</b>	<b>Percent</b>
Agriculture	6.815	33.72
Commercial	0.531	2.63
Public Semi-Public	2.482	12.28
Recreational	0.054	0.27
Residential	5.316	26.31
Industrial	0.345	1.71
Protected Area	3.135	15.51
Waterbody	0.567	2.81
Road	0.963	4.77
<b>Total</b>	<b>20.209</b>	<b>100.00</b>

**Figure 8.4: Proposed landuse % of Bakolia Master Plan**



As per UDPFI guidelines, it is suggested to provide 1.0 to 1.2 ha per 1000 persons for town level open paces (excluding the open spaces in residential pockets), which can be distributed for different residential pockets uniformly for a population of 8000 to 10,000. (Calculation based on the 10-12 mts / person for the entire planned areas). The open spaces are to be developed with other socio cultural and commercial facilities so that they can serve multiple purposes.



### Figure 8.5: Proposed Master Plan of Bakolia

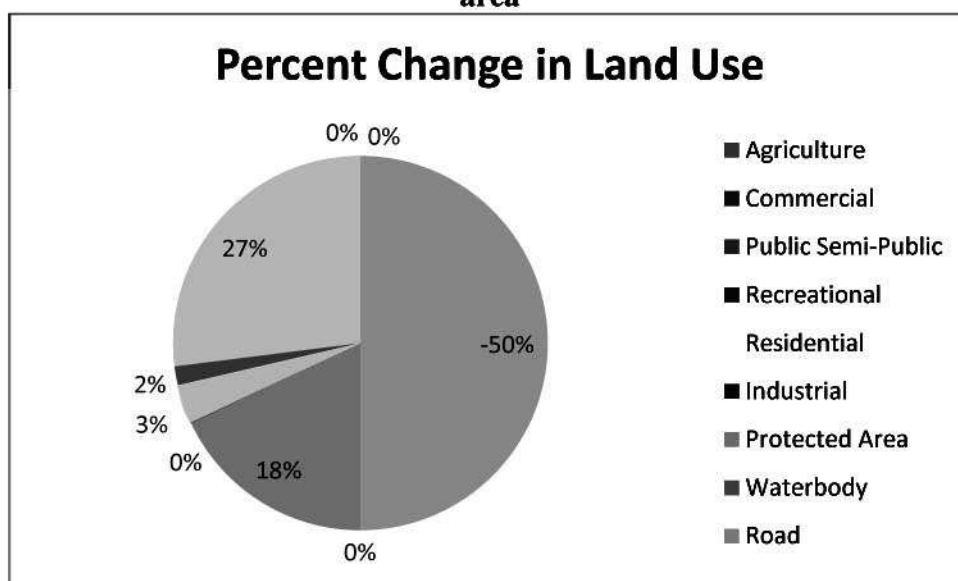
#### 8.3 Land Use Plan

Existing land use and proposed land use of Bakolia Master Plan area shows that there is increase in Commercial (0.0 sq.km), Public and semi-public (2.10sq.km), Park and Playground (0.0 sq.km), Transport and Communication (0.0sq.km), whereas there is decrease in Agriculture (5.81 sq.km), Water bodies (0.00 sq.km) and Residential (0.39 sq.km). The percentage of the Landuse change is shown in Figure 8.5.

<b>Figure 8.5: Existing and proposed landuse of Bakolia Master Plan area (In Sq. Km)</b>				
<b>Land Use</b>	<b>Existing Landuse</b>	<b>Proposed Landuse</b>	<b>Change in Area</b>	<b>% Change</b>
Agriculture	12.63	6.815	-5.81	-46.0
Commercial	0.53	0.531	0.00	0.0
Public Semi-Public	0.39	2.482	2.10	544.7
Recreational	0.05	0.054	0.00	0.0
Residential	4.93	5.316	0.39	7.9
Industrial	0.16	0.345	0.19	121.2
Protected Area	0.00	3.135	3.14	0.0
Waterbody	0.57	0.567	0.00	0.0
Road	0.96	0.963	0.00	0.0
Total	20.21	20.209		

**Table 8.6: Existing and proposed land use of Bakolia Master Plan area**

**Figure 24: Percentage change in landuse between existing and proposed Master Plan area**





### **8.3.1 Issues and potential**

#### **8.3.1.1 Residential**

The density of the Master Plan area is 451 persons per sq.km, i.e, 23 persons per sq. km more than the state average. It can be inferred that the area is highly congested and there is need of housing. There will be a need to 1118 housing. Single storied buildings within the Master Plan area can be restructured upto 1-2 more storied to avoid horizontal expansion. 0.39 sq.km of fallow land within the Master Plan area, as per Survey, can be identified as suitable land for housing.

#### **8.3.1.2 Commercial**

Commercial area covers approximately 2.63% of the existing Bakolia Master Plan area. Bakolia Chariali is the main commercial hub of Bakolia. Other local markets, weekly and daily markets are also seen within the master plan area. However, the commercial area is very congested and need to immediate improvement. Moreover, as per data, only 37% of the population is working which indicates that there is lack of opportunities in the area. The master plan proposal highly demands infrastructure to boost the employment generation of the region. Hence additional four commercial centres with proper infrastructure is proposed for the master plan.

#### **8.3.1.4 Public and Semi-Public**

The Public and Semi-Public landuse includes educational institution, Government offices, Hospital, Temples and Mosques, Museum, Gallery etc. It occupied about 2.48 sq.km of Bakolia Master Plan area covering 12.28% of the whole area. There are 6 Nos.of educational institutions and 8 Nos. of Govt. offices. within the Bakolia Master Plan Area. Few Public and Semi-Public landuse area is proposed to convert into mix-use type of landuse to boost the social infrastructure of the Master plan area.

#### **8.3.1.5 Transport and Communication**

Out of total Master Plan Area, 20.21 sq.km is occupied for Transport and Communication facilities covering 1.63% of the whole area. The primary and major roads connect the regional and important places and with neighbouring important towns and other part of the state. The NH-627 and SH-19 runs through the town. All the major towns of Assam regularly bus services operate from the Bakolia town. All necessity commodities are brought to the area by the Roadways. Now-a-days bus service link the area with the other places within the state and country. These internal roads are covered by PWD. The North Frontier Railway line connects Bakolia Town. The nearest railway station is at Hojai, 21 km away from Bakolia. N. F. rail

communication also makes the area easily accessible from various parts of the region. However, the transport and communication is yet to develop in the district including the Master Plan area of Bakolia..

#### **8.3.1.6 Agriculture**

Agriculture is the major source of income for the people of the Master Plan area. It covers 33.72% of the existing landuse. As per data, in the proposed Master Plan area 5.81sq.km of it has been converted to other landuse as per the need of the population projected and the infrastructure of the area. The main crop is Paddy and apart from this Maize, Cauliflower, Chilli, Tomatoes, and Lettuce are also cultivated. These crops are mainly grown at Bakolia according to the climatic condition and season. People use the labour-intensive technique in farming, as there is no technological advancement. The main reason for people to practice agriculture is the Donka River, which is the main source of harvesting the crops.

#### **8.3.1.7 Green Belt**

Green Belt includes the Hills and water bodies of the Master Plan area. It covers 2.81% of the existing landuse. As per proposed Master Plan area 0.1 sq.km of it has been converted to other landuse as per the need of the population projected and the infrastructure of the area.

## CHAPTER 9: PROPOSED PROJECTS' BRIEF AND TENTATIVE FUNDING SOURCE

### 9.1 Priority Sectors and Projects

The consultation and site visit the need for various infrastructure projects was assessed. The suggestive projects for the Master Plan area of Bakolia Thirteen (18) main projects can be identified which are:

<b>Table 9.1: Proposed Projects for Master Plan Area - Bakolia</b>	
1.	Eco Friendly Park
2.	Dolmens Park
3.	Park
4.	Up gradation of Existing Children Park
5.	Science Park
6.	Open Gym Centre with Building
7.	Market Building (Super Market)
8.	Auditorium cum Conference Hall including interior items
9.	Bus Terminus
10.	Auto/Tempo/E-Rickshaw Parking Place with public toilets/water facility/ Fencing
11.	RCC Drainage Facility for all wards
12.	Sewerage with Treatment Plant under S.W.M
13.	Cleaning Equipments/ Vehicles
14.	Electric Cremation Ground
15.	Town Library Building with interior Facilit
16.	Solar Street Light
17.	Renovation of Public Toilets
18.	Pavers Block Road

These eighteen (18) projects could up lift the development and growth of Bakolia creating a smooth and hassle free socio-economic life for the residents of Bakolia Town along with infrastructure development. The proposed land use maps incorporate the land area into the zoning requirements. The projects can be completed during the plan period i.e. year 2022 to 2042.

## 9.2 Fund Requirement

For the identified Twelve (18) main projects of Master Plan area of Bakolia the tentative fund requirement are as follows:

Table 9.2 Proposed Projects Estimates for Master Plan Area						
Sl. No.	Project	Location	Land availability	Area of Land	Nos	Amount (in Rs Crores)
1	Eco Friendly Park	Ward 1 at Irrigation Switch Gate	Yes	1.5 bigh	1	0.25
2	Dolmens Park	Ward 3 in front of Sarnihang	Yes	3 katha	1	0.30
3	Park	Ward 7 at Seed Firm	Yes	1.5 bigha	1	0.25
4	Up gradation of Existing Children Park	Ward 2	Yes	2 bigha	1	0.08
5	Science Park	Ward 2 Near Bakolia Mini Stadium	Yes	3 bigha	1	0.40
6	Open Gym Centre with Building	Ward 2	Yes	1 Bigha	1	1.80
7	Market Building (Super Market)	Ward 3 Near Sabji Mandi	Yes	3 bigha	3	1.50
8	Auditorium cum Conference Hall including interior items	Ward 2 at Bakolia MB Office Campus	Yes	3 bigha	1	5.0
9	Bus Terminus	Ward 2 near Langsomepi Block	Yes	2.5 bigha	1	8.0
10	Auto/Tempo/E-Rickshaw Parking Place with public toilets/water facility/ Fancing	Ward 1 234 nearby N.H 36 50' X 100'	Yes	4		3.0
11	RCC Drainage Facility for all wards	Ward 1234567	Yes			60.0
12	Sewerage with Treatment Plant under S.W.M					60.00
13	Cleaning Equipments/ Vehicles					50.00
14	Electric Cremation Ground	Ward 1	Yes	4 bigha	1	80.0
15	Town Library Building with interior Facility	Ward 7 near club	Yes	1.5 bigha	1	5.0
16	Solar Street Light	All Ward	Yes		4000	34.0
17	Renovation of Public Toilets	Ward 37	Yes		3	0.20
18	Pavers Block Road	all Wards	Yes		40km	24.00
		Total Project Expenses in Town			Rs.	235.58
The above project is based on the town committee <b>Reference No. BMB/Administrative/26/2021-22/3640</b> Dated 4/4/2022						

The net fund requirement is estimated to be **Rupees Two Hundred Thirty Five Crores Fifty Eight Lakh Only (Rs. 235.58 Crores)** for the coming plan period (2022-2042).

The basic infrastructure projects must be given with priority along with the flood control projects. The project listed may be altered or modified or rejected based on the site condition, administrative capacity and technical feasibility of the individual project components.

The capacity both technical and administrative must be enhanced before initiation of the projects. The town committee along with the constituents villages and community must have consent and ability to complete the projects. The proposed projects would have capacity to make the town competitive and infrastructure ready for future generation.

### **9.3 Indicative Sources of Fund:**

The tentative source of funding for the above mentioned projects are:- AMRUT, Infrastructure Development Fund, Entry Tax, SOPD, Grant-in-aids both Central & State Govt. and State Finance Commission.

**PROPOSAL FOR THE SOLID WASTE DISPOSAL SITE****Solid Waste Disposals :**

1. Area : 2.5 bigha.
2. Allotment : Own Land
3. Location : Bakolia Town Ward No.1, opposite of Bakolia burial centre.
4. Present Condition : just covered the area with boundary wall.
5. Photo Geotag : 26.05072098\_93.18958021

**Figure 9.1 : Status of the Solid Waste Disposal Site**

## **X. CHAPTER 10: DISASTER MANAGEMENT PLAN**

Bakolia Master Plan area is served with 1 fire and emergency service station at present. The whole district is vulnerable to draught and as no such natural water reservoir is there in the district from where the water can be irrigated. Few villages of the Bakolia master plan area are vulnerable to flood because of the Donka River and man made flood. The region is very much vulnerable to earthquake due to its weak geography and fragile geomorphology being in the most dangerous Seismic Zone i.e. Zone (V). The whole region is sitting on the bed of limestone and hence very fragile. As per UDPFI guidelines there is requirement of a Disaster Management Centre of 1ha area to serve the people of the Master Plan area.

### **10.1 Pre-Disaster Preparedness**

The Fire Services department being the nodal agency for disaster management, should identify vulnerable areas e.g. areas with high density and poor accessibility in the city and propose suitable measures. The department should make people aware about after effects of disaster particularly school children through mock drills in school, media campaigns and advertisements about emergency procedures and location of emergency shelters etc. Mock drills need to be done also in government and public offices from time to time.

### **10.2 Post Disaster Preparedness**

It has been observed that any disaster is generally followed by break down of communication lines and disruption of essential services. Also the district is vulnerable to various terrorist groups. Bakolia being the bordering area of Assam and Meghalaya is also vulnerable to clashes between borders. Therefore, the key communication centres should be safely located to be free from natural disasters e.g. flood, fire, landslide, earthquake or any other emergency situation

### **10.3 Plan Implementation**

The Master Plan implementation requires (i) development of new areas (ii) redevelopment of existing developed areas and (iii) conservation of eco sensitive areas. 'Office of the Deputy Director, Town and Country Planning, Karbi Anglong, Diphu, Assam' shall be the nodal agency for the Bakolia Master Plan implementation. Landuse plan, land use zoning, sub-division and development control regulations including local building byelaws would in general be the base for all development, and redevelopment in the Master Plan area.



## **ZONING REGULATION:**

### **XI. CHAPTER 11: ZONING REGULATION**

#### **11.1 SCOPE:**

**11.1.1.** The Schedule lays down regulations for the use of land and buildings built thereon consistence with maintaining minimum standards of density of buildings, protection of open spaces, sanitation and environmental hygiene.

**11.1.2.** The Zoning Regulations should be read in conjunction with the zones proposed in the Master Plan.

#### **11.2 DEFINITION:**

For the purpose of these regulations, the following definition shall apply.

**11.2.1.** Words used in the present tense shall include the future; the singular number also includes the plural and the plural also the singular.

**11.2.2.** “ Agriculture” includes horticulture , farming , growing of crops , fruits vegetable , flowers grass , fodder , tress of any kind of cultivation of soil , breeding and keeping of livestock including cattle , horse ,donkeys mules , pigs , fish , poultry and beast the use of land which is ancillary to the farming of land or any other agriculture purpose ,but shall not include the use of any land attached to the building for the propose of a garden to be used along with such buildings and “ Agriculture “ shall be construed accordingly .

**11.2.3.** “Authority” shall mean the local , regional or any other “Authority” appointed by the State Government for the purpose of administering the Act. Unless appointed by the State Government the Authority in the case of Municipal Areas shall be taken to mean the Municipal Board for the area constituted under the Assam Municipal Act. 1956 (Assam Act XV of 1957) .

**11.2.4.** “Boarding House “means a building or part of a building in which is carried on wholly or partially the business of the supply of meals to the public or a class of the public for consumption in the premises.

**11.2.5.** “Building” ant construction for whatsoever purpose and of whatsoever materials construction and every part thereof whether used as human habitation or not and includes foundation , plinth wall , chimneys , drainage works , fixed platforms , verandah , balcony , cornice of projection , par of building or anything affixed thereto or any wall enclosing or intended to enclose any land or space .

**11.2.6.** “Building of Accessory Use “- a subordinate building , use of which is incidental to that of a principal building on the same plot such as garage , coal or woodshed , peon’s quarter , etc .

**11.2.7. “Building Height of “** – the vertical distance measured , in the case of flat roofs from the average level of the centre line of the adjoining street to the highest point of the building adjacent to the street wall , and in the case of pitched roofs, upto the point where the external surface of the outer wall intersects the finished surface of the sloping roof and in the case of gables facing the road , the mid-point between the eaves level and level the ridge , Architectural features serving no other function except that of decoration shall be excluded for the purpose of taking heights . If the building does not abut on a street, the height shall be measured above the average level of the ground and contiguous to the building.

**11.2.8 “Building Set Back”-** the distance by which any building or structure shall be separated from the boundary lines of the plot.

**11.2.9 “Clean Industry”-** industries which do not throw out any smoke, fume, noise, offensive odour harmful industrial wastes and employing not more than 10 workers with or without power.

**11.2.10. “Commerce”-** means carrying on any trade, business of professional sale or exchange of goods of any type whatsoever , and includes the running of with a view to make profit , Hospitals, Nursing Homes, infirmaries, education institutions and also includes hostel, clubs, theatres, restaurants , boarding house not attached to any educational institution, series and “Commercial” shall be construed accordingly.

**11.2.11. “Commercial Use”-** includes the use of any land or building or part thereof for purpose of commerce as defined or for storage of goods, or as an office, whether attached to industry or otherwise.

**11.2.12. “Coverage”-** is the percentage ratio of the plinth area of the main and accessory buildings to the total area of the plot.

**11.2.13. “Customary Home occupation”-** means occupation other than that of operating an eating or drinking place offering services to the general public carried on by a member of the family residing on the premise and in accordance with which there is on display that will indicate from the exterior that the building is being utilized in whole or in part for any purpose other than that as a dwelling and in connection with which an article or service is sold or held up for sale except that produced by a member of the family residing on the premises and no mechanical equipment is used except as is customary for purely domestic or household purpose.

**11.2.14 “Development”** – means the carrying out of building, engineering, mining or other operations in on over or under the land, or making of any material change in the use of any building or of land.

Provided that the following operations or uses of land shall not be deemed for the purposes of these Regulations to mean Development of the land, that is to say \_

- (a) The carrying out of works for the maintenance , Improvement or other alteration of any building being works which affect only the interior of the building or which do not materially affect the use and the external appearance of the building ;

(b) The carrying out by a local or statutory authorities of any works required for the maintenance or improvement of road, being works carried out on land within the boundaries of the road :

(c) The carrying out by local authority any works for the purposes of inspecting , repairing or renewing any sewers , main pipes , cables or other apparatus including the breaking open of any street or other land for that purpose:

(d) The use of any building or other land within the cartilage of a dwelling house for any purpose incidental to the enjoyment of the dwelling house as such.

**11.2.15. “Development Schemes”-** means the scheme for the development or redevelopment or improvement of the Bakolia master plan Area or any part thereof.

**11.2.16. “Dwelling”-** a building or a portion thereof which is designed or used wholly or principally for residential purpose. This shall not include boarding or rooming house, tents, tourist camps, hostel or other structures designed or used primarily for transient residents.

**11.2.17. “Family”-** a group of individuals normally related in blood or connected by marriage living together as a single house- keeping unit and having a common kitchen. Customary domestic servants shall be considered adjunct to the term ‘Family’.

**11.2.18. “Floor Area”-** shall mean useable covered area of a building at any floor level.

**11.2.19. “Floor Area Ratio (FAR)”-** means quotient obtained by dividing the total covered area (plinth area) on all floors by the area of the plot. Multiplied by 100.

$$\text{FAR} = \frac{\text{means covered area of all floors} \times 100}{\text{Plot area}}$$

**11.2.20. “Hotel”-** means a building or a part of a building used as a lodging and boarding house.

**11.2.21. “Industry”-** includes the carrying of any manufacturing process as defined in Factories Act. 1984; and “industry” shall be constructed accordingly.

**11.2.22. “Industry use”-** includes the use of any land or building or part thereof for industry as defined.

**11.2.23 “Light Industry”-** industries which do not throw out excessive smoke noise , offensive odour or harmful industrial wastes , employing not more than 100 workers and using power of not more than 100 H.P. such industries ,except in the case of foundries and smithies do not consume any solid fuel .

**11.2.24 “Lodging House”-** means a building or a part of building used for the reception of guests and travellers desirous of staying or sleeping therein.

**11.2.25 Medium industry** “- medium industries are those which employ more than 100 workers and may use any kind of motive power of fuel, subject of course to toxious features. Factories which are classified as heavy industries under the Factories Act do not come under this category.

**11.2.26 “Non-Conforming building or use”**- a building structure or use of land existing at the time of commencement of these regulations and which do not conform to the regulations pertaining to the zone in which it is situated .

**11.2.27 “Occupier” includes—**

- (a) a tenant ;
- (b) an owner in occupation of, or otherwise using his land ;
- (c) a rent free tenant of any land ;
- (d) a licensee in occupation of any land ; and
- (e) any person who is liable to pay to the owner damage for the use and occupation of any land ;

**11.2.28. “Open Space”** – means any land whether enclosed or not on which not more than one twentieth part is covered with building and whole of the remainder has been laid out as a public garden or used for purpose of recreation or lies waste and unoccupied .

**11.2.29“ Owner”**- includes a mortgagee in possession , a person who for the time being is receiving or is entitled to receive , or has received , the rent or premium for any land whether on his own account or on behalf or for benefit of any other person or as an agent , trustee , guardian or for any other person or for any religious or charitable institution , or who would so receive the rent or premium or he entitled to received the rent or premium if the land were let to a tenant ; and includes the Head of a Government or General Manager of a Railway , the Secretary or other Principal officer of a Local Authority , Statutory Authority or company , in respect of properties under their respective control .

**11.2.30 “Parking Space”**- means an area enclosed or unenclosed sufficient in size to store one or more automobiles or any other conveyance together with a driver way connecting the parking space with a street , or alley and permitting ingress or egress of all such conveyances .

**11.2.31 “Plinth”**- means the portion of a structure between the surface of the surrounding ground and surface of the floor, first above the ground.

**11.2.32 “Plinth Area”**- means the built up covered area measuring at the floor level of the basement or of any story.

**11.2.33 “Plot”** – a piece of land occupied or intended for occupancy by a main building or use together with its accessory building and uses customary and incidental to it , including the open spaces required by these regulations and having frontage upon a street or upon a private way that has officially been approved by the competent authority .

**11.2.34 “Plot Width”**- the shorter distance from one side of the plot line to the other measured through that part of the plot to be occupied by the building.

**11.2.35 “Prescribed”** - means prescribed by rules and regulations under the Assam Town and Country Planning Act 1959 (as amended).

**11.2.36 “Public and Semi-Public Place”**- means any place or building which is open to the use and enjoyment of the public , whether it is actually used or enjoyed by the public or not, and whether the entry is regulated by any charge or not .

**11.2.37 “Repairs”**- means any renovation applied to any structure, which does not in any way changed the specification of the structure but saves the structure from further deterioration.

**11.2.38 “Residence”**- includes the use for human habitation of any land or building or part thereof including gardens, grounds, garages, stables and out houses, if any appertaining to such building and ‘residential’ shall be construed accordingly.

**11.2.39 “Required Open Space”**- the space between the plot lines and the minimum building set back lines.

**11.2.40 “Roads or Street”**- any highway, street, lane path way, alley, stairway, passage way, carriage-way, footway, square place or bridge, whether a thoroughfare or not over which the public have a right of passage or access or have passed and had access uninterruptedly for a specified period, whether existing or proposed in any scheme and includes all bunds, channels, ditches, storm water, drains, culverts, sidewall, traffic island, roadside trees and hedges, retaining walls, fences, barriers and railway within the road lines.

**11.2.41 “Service Industry”** industries which are not engaged in the manufacture of goods or articles, but are mainly concerned with repairs, maintenance, servicing and or other jobbing work.

**11.2.42 “Set back line”** means a line usually parallel to the plot boundary and laid down in each case by the authority beyond which nothing can be constructed towards the plot boundary.

**11.2.43 “Site”**- of a building includes not only the land actually covered by the building but also the open spaces around the building required under these rules.

**11.2.44 “Storey”** the portion of a building included between the surface of any floor and the surface of the floor next above it or if there be no floor above it, then the space between any floor and the ceiling next above it.

When measured, the height of a habitable basement extending at least 5 feet above ground level or a habitable attic shall be counted as storey.

**11.2.45 “Street line”**- means the line defining the site limits of a street.



**11.2.46** “Structure” any combination of material including building constructed or erected the use of which requires location on the ground including among other things, signs, signboards, fences and wall that are more than three feet height.

**11.2.47** “To Abut”- means to abut on a road such that any portion of the building is facing the road boundary.

**11.2.48** “To construct” means to erect, re-erect, and make material alterations.

**11.2.49** “to Erect” to construct a building for the first time or to re-construct existing building after demolishing it according to some fresh or revised plans.

**11.2.50** “Total floor area” – the area of all floors of a building including habitable attics and basements.

**11.2.51** “To make Material alteration”- to make any modification in any existing building by ways of an addition or alteration, or any other change in the roof window, door, compound, sanitary and drainage system in any respect whatsoever, Opening of a window and providing inter communication doors shall not be considered as material alterations. Similarly modification in respect of gardening, wheel washing, painting, retailing and other decorative works shall not be deemed to be deemed to be material alterations, it further includes:-

- (a) Conversion of a building or any part thereof for human habitation as one dwelling house into more than one dwelling house and vice-versa;
- (b) Conversion of a building or a part thereof suitable for human habitation into a dwelling house or vice-versa;
- (c) Conversion of a dwelling house or a party thereof into a shop, warehouse or factory or vice-versa.
- (d) Conversion of a building used intended to be used for one purpose such as shop, warehouse or factory, etc. Into one or another purpose.

**11.2.52** “To Re-erect” – to construct for a second time or subsequent time a building or part of a building after demolishing it on the same plan as has been previously sanctioned.

**11.2.53.** “Water Course:- means a natural channel or an artificial one formed by draining or diversion of a natural channel meant for carrying storm water either from a single property or several properties draining thereof in combination .

**11.2.54.** “Warehouse”- means a building the whole or substantial par of which is used or intended to be used for the storage of goods whether for keeping or for sale or for any similar purpose but does not include a store room attach to , and use for the proper functioning of a shop .

**11.2.55.** “Yard”- means an open space at ground level between a building and the adjoining lines of the plot unoccupied and unobstructed except by encroachment or structures specifically permitted by these byelaws on the same plot with a building. All yard measurement shall be the minimum distance between the front, rear and side yard- plot boundaries, as the case may be, and

the nearest point of the building including enclosed or covered porches. Every part of every yard shall be accessible from every other part of the same yard.

**11.2.56.** “yard front” – means a yard extending across the front of a plot between the side yard lines and being the minimum horizontal distance between the street line and the main building or any projection thereof other than steps , unenclosed balconies and unenclosed porches .

**11.2.57** “yard rear” – means a yard extending across the rear of a plot measured between a plot boundaries and being the minimum horizontal distance between the rear plot boundary and the rear of the building or any projection other than steps. Unenclosed balconies or unenclosed porches. In a corner plot the rear yard shall be considered as parallel to the street upon which the plot, has its least dimension. In both the corner and interior plots the rear yard shall be at the opposite end of the plot from the front yard .

**11.2.58** “Yard side “ – means a yard between the building and the side line of the plot and extending from the front line to the rear of the plot and being the minimum horizontal distance between the side boundary line and the sides of a building of any other projections other than stops unenclosed balconies or unenclosed porches .

The Bakolia Master Plan area is hereby divided in to the following six zones shown on the accompanying Zoning Map which together with all explanatory matters thereon , is hereby declared to be a part of these regulations .

### **11.3 CLASSIFICATION OF ZONES AND ESTABLISHMENT OF ZONING MAP.**

**11.3.1.** The zones designated under 3.1 may be further

Where non-conforming use status applied to a structure and premises in combination, removal or destruction of the structure shall eliminate the non-conforming status of the land.

- a) Low Density
- b) Medium Density
- c) High Density
2. Commercial Zones.
3. Industrial Zones –
  - (a) Light Industry
  - (b) Medium Industry
4. Public and Semi-public Zone
5. Recreational and Open Space Zone
6. Green Belt Zone.

**11.3.2** The Zones designated under 3.1 may be further divided into sub-zones by the authority where it deems it expedient, the designation of such sub-zones being dependent on the special use to which each such sub-zones is being utilized.

**11.3.3.** Zone boundaries of each zone shall be as established in the zoning Map of the Bakolia Master plan area and a copy of which shall be located in the office of the local authority in a



place easily accessible to the public which be the final authority as to the current zoning status of land and water area building and other structure in the Bakolia Master Plan area.

**11.3.4.** Interpretation of zone boundaries – where uncertainly exists as to the boundaries of zones as shown on the zoning Map, the following result shall apply:-

- (a) Boundaries indicated as approximately following the centre lines of streets, highways or alleys shall be construed to follow such centre line.
- (b) Boundaries indicated as approximately following established plot boundaries shall be construed as following such plot boundaries.
- (c) Boundaries indicated as approximately following the centre lines of streams, river cannels , lakes or other bodies of water shall be construed to follow such centre lines.
- (d) Boundaries indicated as parallel to or extension or features indicated in sub- sections (a) to (c) above shall be so construed distances not specially indicated on the zoning Map shall be determined by the scale of the map.
- (e) Where physical or cultural features existing on the ground are at variance with those shown on the zoning Map , or in other circumstances not covered by sub-section (a) through (d) alone , the Director of Town & country planning shall interpret the zone boundaries.

**11.3.5.** No changes of any nature shall be made in the zoning Map except in conformity which the procedures set forth in these Regulations. Any unauthorized change of whatever kind by any person shall be considered a violation these Regulations and punishable as provided under clause 16 of these Regulations.

**11.3.6.** Regardless of the existence of purported copies of the official zoning Map which may from time to time be made or published, the official zoning Map which shall be located in the office of the local authority in a place easily accessible to the public shall be the final authority to the current zoning status of land and water areas, building and other structures in the planning area.

#### **11.4 APPLICATION OF ZONING REGULATION:**

**11.4.1.** The requirement of this Regulation within each zone shall be the minimum requirement and shall apply uniformly to each class or kind of structures or land except as hereinafter.

**11.4.2.** No building, structure, or land shall hereafter be used or occupied and no building or structure or part of the building shall hereafter be erected, re- erected or materially altered unless in conformity whit al of the regulations herein specified for zone in which it is located.

**11.4.3.** No building or other structure shall hereafter be erected re-erected or materially altered.

- (a) To exceed the height.
- (b) To accommodate or house a greater number of families.
- (c) To occupy a greater percentage of plot area.
- (d) To have narrower or smaller rear yards, front yards, slide yards of other open spaces than herein required, or in any other manner contrary to provisions of these regulations.

**11.4.4.** No part of a yard or other space, or off street parking or loading space required about or in connection with any building for the purpose of complying with this regulation shall be included as part of a yard, open space, or off street parking or loading space similarly required for any other buildings.

**11.4.5.** No yard or plot existing at the time of coming into force of these regulation shall be reduced in dimension or are below the minimum requirements set forth herein ; yard or plots created after the effective date of these regulations shall meet at least the minimum requirement established by these Regulation .

**11.4.6.** Non-conforming plots, non-conforming uses of land, non-conforming structures and non-conforming use of structure and premises;

**11.4.6.1.** Within the zones established by these regulations or amendments that may later be, adopted therein existing plots, structures and uses of land and structures which were lawful before these regulations came into force or were amended, by which would be prohibited, regulated, or restricted under the terms of these regulations or future amendments, shall be permitted to continue until they are removed. Such uses are declared by these regulations to be incompatible with permitted uses in the zones involved. Such non-conformities shall not be enlarged, upon, expanded or extended nor be used as grounds for adding other structures or uses prohibited elsewhere in the same zone.

**11.4.6.2.** A non-conforming use of a structure, a non-conforming use of land or a non – conforming use of a structure and land shall not be extended or enlarged after coming into force of these regulations by attachment on a building or premises of additional signs intended to be seen from off the premises, or by the addition of other uses of a nature which would be prohibited generally in the zone involved.

**11.4.6.3.** Nothing in these regulations shall be deemed to require a change in the plans, constructions, or designated use of any building on which actual construction was lawfully begun prior to the coming into force of these regulations and upon which actual building construction has been diligently carried on. Actual construction is hereby defined to include the placing of construction materials in permanent position and fastened in a permanent manner; except that where demolition or removal of an existing building has been substantially begun preparatory to rebuilding as demolition or removal shall be deemed to be actual construction provided that work shall be diligently carried on until completion of the building involved.

**11.4.6.4.** If two or more plots or combinations of plots and portions of plots with continuous frontage in single ownership are of the record at the time of coming into force or amendment of the regulations and if all part of the plots do not meet the requirement for plot width and area as established by these regulations , the land involved shall be considered to be an undivided parcel for the purposes of these regulations and no portion of said parcel shall be used or sold which do not meet plot width and area requirements established by these regulations , nor shall any division of the parcel be made which leaves the remaining plot with width or area below the requirements stated in these regulations .

**11.4.6.5. Non-conforming uses of land** – Where on the date of coming into force of these regulations or amendments thereto lawful use of land exists that is made no longer permissible under the terms of these regulations as enacted or amended such use may be continued, so long as it remains otherwise lawful, subject to the following provisions :-

- (a) No such non-conforming use shall be enlarged or increase, nor extended to occupy a greater area of land than was occupied on the date of coming into force of these regulations or amendments thereto.
- (b) No such non-conforming use shall be moved in whole or in part to any other portion of the plot or parcel occupied by such use on the date of coming into force of these regulations or amendments thereto.
- (c) If any such non-conforming use of land ceases for any reason for a period of more than 30 days any subsequent use of such land shall conform to the requirements specified by these regulations for the zone in which such is located.

**11.4.6.6. Non-conforming structure** – where a lawful structure exists on the date of coming into force of these regulations or amendments thereto that could not be built under the terms of these regulations by reason of restriction on area, plot coverage, height yards or other characteristics of the structure or its location on the plot such structure may be continued so long as it remains otherwise lawful, subject to the following provisions:-

- (a) No such structure may be enlarged or altered in a way which increases its non-conformity.
- (b) Should such structure be destroyed by any means to an extent of more than 50 percent of its replacement cost at the time of destruction, it shall not be re-constructed except in conformity with the provisions of these regulations,
- (c) Should such structure be moved for any reason for any distance whatever, it shall thereafter conform to the requirements for the zone in which it is located after it is moved.

**11.4.6.7. Non-conforming uses of structures**- If a lawful use of a structure, or of structures and premises in combination, exists on the date thereto of coming force of these regulations or amendments that would not be allowed in the zone under the terms of these regulations the lawful use may be continued so long as it remains otherwise lawful subject to the following provisions:-

- (a) No existing structure devoted to a use not permitted by these regulations in the zone in which it is located shall be enlarged, extended, constructed, re-constructed, moved or structurally altered except in changing the use of the structure to use permitted in the zone in which it is located;
- (b) No such non-conforming use shall be enlarged or increased or extended to occupy a greater area of the building that is occupied by such use the time of coming into force of these regulations or amendments thereto;
- (c) Any structure, or structures and land in combination, in or on which a non-conforming use is superseded by a permitted use, shall thereafter conform to the requirements of these regulations for the zones in which such structure is located, and the non-conforming use may not there-after be resumed; when a conforming use of a structure, or structures and premises in combination is discontinued or abandoned for six consecutive months or for

18 months during any three year period, the structure or structures and premises in combination, shall not thereafter be used except in conformance with the regulations of the zone in which it is located.

**11.4.6.8. Repairs and Maintenance** – One any building devoted in whole or in part to any non-conforming use, work may be done in any period of 12 consecutive months on ordinary repairs, or on repair or replacement of non-load-bearing walls, fixtures, wiring or plumbing, to an extent not exceeding 10 percent of the current replacement value of the building, provided that the cubic contents of the building as it existed at the time of coming into force of these regulations or amendments thereto shall not be increased.

Nothing in these regulations shall be deemed to prevent the strengthening to a safe condition of any building or part thereof declared to be unsafe by any official charged with protecting the public safety upon order of such official.

**11.4.6.9. Uses under Exception Provision not non-conforming uses** – Any use for which a special exception is permitted as provided in these regulations shall not be deemed a non-conforming use, but shall without further action be deemed a conforming use, in the zones in which it is permitted.

**11.4.7. “Accessory Use”**- the term Accessory use shall not include:-

- (a) Any use not on the same plot, with the use to which it is accessory, unless authorized by the authority;
- (b) Any use not customarily incident to a permitted use;
- (c) Any use detrimental to the neighbourhood by reason of emission of smoke, noise, odour, vibration, dust or fumes;
- (d) Storage of more than two commercial automobiles except on an agricultural piece of land;
- (e) A secondary dwelling on the same plot with a main dwelling, unless each building shall have at least the open space and equivalent plot size as required by Clause 4.8;
- (f) Advertising signs excepting signs not more than 10 sq.ft. or 0.9 sq.m in total area pertaining to the lease, sale or use of a plot or building on which they are placed. On a plot occupied by a dwelling there shall not be more than two signs with a total area of 2 square feet or 0.18 sq.m. per sign for each family house;

**11.4.8. Yards and Open Spaces:--**

- (a) Each structure hereafter erected, re-erected or materially altered shall be provided with specific front, side and rear yard;
- (b) On plots occupied by building only, not exceeding 30 percent of the rear yard may be occupied by one storied building of accessory use;
- (c) Special type of Building- Subject to the requirements of set-backs from prescribed street lines and side and rear yards under the representative Rules no building used for Theatres, Cinema Halls, Concerts or Assembly Halls, Stadium, buildings intended for Religious worships, Hospital or Dispensary buildings, Markets, Exhibition Halls or Museum and other such buildings shall have an open space of not less than 25 ft. or 7.5 m. from the front boundary and 15 ft. or 4.5 m. from the side and rear boundaries of the plot on which such building are construction.



**11.4.9. Visibility at Intersections in Residential Zone-** On corner plot in any residential zone nothing shall be erected, placed, planted or allowed to grow in such a manner as materially impede vision between a height of two and half and ten feet above the centre line levels of the intersecting streets in the area bounded by the street lines of such corner plot and a line joining points along said lines 50 ft. or 15.0 m. from the point of the intersection.

**11.4.10. Building abutting two or more streets-** When a building abuts two or more streets the setbacks from the streets shall be such as if the building was fronting each such street.

**11.4.11. Means and Access:-**

(a) No building shall be constructed on any plot for any-use where there is no means of access to such plot;

(b) Notwithstanding anything prescribed in the Master Plan the widths of such access or lanes, roads etc. to one individual plot or plots whether private or public shall be prescribed by the Authority;

**11.4.12.** The authority may prescribe a line on one or both sides of any public or private road or street and no person shall construct, re-construct or materially alter any portion of any building or structure on land within such prescribed street line.

**11.4.13.1.** If any building or structure or part of a building or structure abutting on a public or private road or street is within such line of the street, the Authority may required such building or structure to be set-back beyond such prescribed line to a distance as prescribed in these regulations, whenever it is proposed:-

(a) To re-build such building or structure or to take sown such building or structure;

(b) To remove, re-construct or make any addition to or structure alteration in any portion of such building or structure which is within such regular prescribed street line.

**11.4.13.2.** When any building or structure or any part thereof within the prescribed line of street falls down or is burnt down or is taken down the Authority may at one take possession of the portion of land within the prescribed line of street previously occupied by the said building or structure and if necessary clear the same under the provisions of the Assam Town and Country Planning Act, 1959 (as amended)

**11.4.14. Land Subdivision and Layouts-** Except as otherwise provided, no land will be developed or sub-divided and no layouts on land shall be prepared, altered, done or executed unless in conformity with these regulations herein specified for the zones in which the land is located.

**11.4.15. Fences, walls and hedges-** Notwithstanding any other provision in these regulations, fences, walls and hedges may be permitted in any required yard, or along the edge of any yard provided that no fence, wall or hedge along the sides or front edge of any front yard shall be over 3 ft. or 0.0 m. in height:

**11.4.16. Off-street parking space for Motor Vehicles, Scooters and Cycles-**

(a) Off-street parking space shall be provided on any plot on which the uses specified in the Table –I are hereafter established; such parking space shall be provided with adequate vehicular access to a street.

(b) Each off-street parking space provided shall not be less than 18 Sq.m. (200 Sq.ft.), 3 Sq.m. and 1 Sq.m. of area for car scooter and cycles respectively. The area of drives, aisles and such other provisions required for adequate access shall not be counted as the part of area specified for parking.

(c) Off-street parking space provided shall be not less than the minimum requirements specified in the Table – I for each type of use;

(d) If a vehicle parking space required by these regulations is provided in parking areas by groups of property owners for their manual benefit, the Authority may construe such use of this space as meeting the off-street parking requirements of these regulations.

(e) If off-street vehicle parking space cannot be reasonably provided on the same plot on which the principal use is conducted the Authority may permit such space to be provided on their off-street property, provided such space lies within 400 feet or 12.0 m: of the main entrance to such principal use. Such vehicle parking space shall be deemed to be required open space associated with the permitted use and shall not therefore, be reduced or encroached in any manner;

## 11.5 REGULATIONS FOR DIFFERENT ZONES

**11.5.1.** Regulations for different zones regarding minimum size of plots, minimum set-backs of the building or structure from the prescribed street line, maximum coverages etc. shall be as follows-

### REGULATIONS FOR DENSITY, COVERAGE, FLOOR AREA RATIO AND SET BACK FOR DIFFERENT ZONES.

#### 11.5.1.1. Residential Use Zone-

##### (i) Plot size\_

Density	Area in Sq.ft.	Area in Sq.mt.
Low	5760	535.88
Medium	4320	401.76
High	2880	268.84

In case of low cost housing for low income group and slum re-housing the minimum plot size could be 1800 sq.ft.

##### (ii) Plot Coverage

Density	Maximum Coverage	Maximum F.A.R.
Low	40.p.c.	75
Medium	45.p.c.	100
High	50.p.c.	125

##### (iii) set-back line\_

(a) Front set-back- minimum set-back for all types of buildings is 15 ft. unless it is specified for particular street;

(b) Side and Rear set-back- Minimum side set-back and rear set-back for all individual plot are 5ft and 10 ft. respectively

**11.5.1.2. Government Offices\_** In order to achieve architectural composition and intensive use the following provisions are stipulated.

Maximum FAR.	125 p.c
Maximum Coverage	50 p.c.
Maximum Covered parking	10 p.c.
Minimum Front set-back	20 ft.
Minimum side and rear set-back	10 ft.

**11.5.1.3. Commercial Use Zone-**

(a) Minimum individual plot size for commercial use....	1250 sq.ft. (116.25 sq.m.)
(b) Maximum F.A.R. ....	200
(c) Maximum Ground floor coverage including 5 p.c.for covered garage for cars and cycle ....	70 p.c.
(d) Coverage for second floor and above ....	50 p.c.
(e) Minimum front set-back unless it is specified for particular street. ....	10 ft.
(f) Side set-back ....	3 ft.
(g) Rear set-back ....	10 ft.
(h) Set-back for Market complex- Minimum front set-back from Major Road ....	30 ft.
(i) Side and rear set-back ....	10 ft.
(j) Maximum coverage including 5 p.c. coverage garages ....	50 p.c.
(k) Set-back for ware-housing, storage, etc.-	
i. F.A.R. ....	300
ii. Front ....	20 ft.
iii. Side ....	10 ft.
iv. Rear ....	15 ft.
v. Coverage ....	70 p.c.

**11.5.1.4. Industrial Zone-**

Sl.No.	Requirements	Light Industry	Medium Industry
1.	Minimum size of plot	8,000 sq.ft (744 sq.m.)	20,000 sq.ft. (1860 sq.m.)
2.	Minimum set-back		
	Front	20 ft (6 m.)	30 ft.(9 m.)
	Side	10ft.(3m.)	15 ft.(4.5m.)
	Rear	20 ft.(6 m.)	20 ft.(6 m.)
3.	Maximum Coverage	45 p.c.	55 p.c.
4.	Maximum F.A.R.	100	75

N.B. If any structure or building is permitted in the Industrial Zone for human habitation under the provision of these rules the yard condition shall be same as prescribed for high density residential zone.



**11.5.2.** Regulations for different zones regarding use permitted, uses permissible on appeal to the authority and uses prohibited shall be as follows-

**11.5.2.1.** Regulations for Residential Zone-

**11.5.2.1. A** Use permitted-

- (a) Dwellings;
- (b) Churches, temples, mosques and other places of worship;
- (c) Schools offering general educational courses, community halls, welfare centre, public libraries, art galleries, museums; hostels, for educational institution offering general courses gymnasiums;
- (d) Medical, eye and dental practitioner's clinics;
- (e) Professional offices and incidental to such use not occupying a floor area exceeding 200 sq.ft. for 18.0 sq.metre;
- (f) Club houses not conducted as business, public parks and private parks which are not utilized for business purposes;
- (g) Nurseries and general agriculture, horticulture;
- (h) Accessory uses customarily incidental to any principal use and meeting the requirements of clause 3:4.
- (i) Post offices, Police out-post and fire stations;
- (j) Taxi stands and bus stands, Cycle and Rickshaw stands

**11.5.2.1. B:** Use permissible on appeal to the authority-

- (a) Municipal state and Central Government uses but not offices;
- (b) Public utilities;
- (c) Dispensaries for human care except they are meant primarily for mental treatment, convalescent houses sanatoria;
- (d) Philanthropic uses, residential hostels restaurants, cafeteria milk barks, boarding or lodging house in independent buildings;
- (e) Clean industry considering the ( performance characteristics) following indicators-(i) Noise (ii) Vibration (iii) Smoke (iv) Dust (v) Odour (vi) Effluent (viii) Employment (ix) Vehicular traffic (x) General nuisance.( and indicative list of industries which could be permitted in residential area subject to the condition it satisfies is given in Appendix).
- (f) Trade or other similar schools not involving any danger of fire explosion, noise, vibration, smoke; dust; odour; heat or other objectionable effluents;
- (g) Branch Offices of banks and local offices of any public authority and telegraph office;
- (h) Golf clubs and green house,
- (i) Market places with only vegetables, fruits, flowers; fish and meat and other connected day to day requirements;
- (j) Theatres, assembly or concert halls, dance and music halls and such other places of entertainment;
- (k) Electric sub-station;
- (l) Neighbourhood shopping centre with goods offered for sale for day to day requirements and the uses permissible under clauses 5 and 5.2.1.C;

**11.5.2.1. C:** A building or premises with a shop frontage along a street in residential Zones- Permission may be allowed only for the following purposes subject to the conditions that-

- (a) The additional uses permissible hereunder shall be restricted to a depth or 20 ft. or 6.0 metre and only the building in the front portion abutting the street on which the shop line is marked;
- (b) Where the building or premises abutted on two or more streets, no direct opening of such shops may be permissible on the street, on which the shopping line is marked;
- (c) When the ground floor of such building or premises is allowed for shops under this clause the following uses may be permitted.
  - (c) (i) Any use permitted in Residential Zone;
  - (ii) Stores of shops for the conduct of retail business;
  - (iii) Branch offices of banks, professional offices, local offices of any public created by law;
  - (iv) Hair dressing saloon and beauty parlours;
  - (v) Shoe repairing and shining shops;
  - (vi) Laundry and tailoring shops not employing more than 5 persons;
  - (vii) Shops for goldsmith, watch and clock repairs and picture framing;
  - (viii) Radio and household appliances repair and umbrella repairs (not employing more than 5 person);
  - (ix) Tea stalls, restaurants and eating house;
  - (x) Uses permissible under (a),(b),(c),(d),(f),(g),(h), of clause 5.2.1.B

**11.5.2.1. D.** Use prohibited- All other uses not specifically permitted herein

## **11.5.2.2: REGULATIONS FOR COMMERCIAL ZONES**

**11.5.2.2. A.** Use permitted-

- (a) Shops of all kinds, business offices and exchanges;
- (b) Whole sale establishments and departmental stores;
- (c) Auto supply stores and showrooms for motor vehicles and machineries;
- (d) Storage of furniture and household goods;
- (e) Club houses or other recreational activities conducted as business;
- (f) Place of amusements of assembly;
- (g) Temples, churches, Mosques and other places of worship;
- (h) Schools and other institutions, libraries, museums and art galleries;
- (i) Dispensaries, Clinics and veterinary dispensaries and hospitals;
- (j) Police out-post and telegraph offices and fire stations.
- (k) Local offices of any public authority created by law and professional office
- (l) Banks and safe deposit vaults;
- (m) Municipal, State or Central Government uses but not offices;
- (n) Hostels, boarding and lodging houses, eating houses;
- (o) Printing press, book binding and block making aggregate motive power not exceeding 5 H.P. and not employing more than 5 persons;
- (p) Cleaning and dyeing establishment;
- (q) Carpentry and cane making and retailing of building materials;

- (r) All other uses permitted under clause 5.2.1. A and under (a),(b),(c),(d),(f),(h),(j),(k),(i) of clause 5.2.1. B and all uses under clause 5.2.1.C;
- (s) Accessory building or uses customarily incidental to any permitted principal use including storage space upto 50 percent of the total floor area use for the principal use;

**11.5.2.2. B. Uses permissible on appeal to the Authority-**

- (a) All types of industries that are permitted in Residential area;
- (b) Petrol filling stations and kerosene storage
- (c) Electric sub-stations;
- (d) Coal, wood and timber yards;
- (e) Motor repairing garages;
- (f) Repair, cleaning, printing or light manufacturing using not more than 10 H.P. motive power in total and employing not more than 5 persons;
- (g) Wholesale godown and warehouses;
- (h) Taxi, bus and truck parking area;

**11.5.2.2. C. Use prohibited-** All other uses not specifically permitted herein.

**11.5.2.3. REGULATION FOR LIGHT INDUSTRY ZONE**

**11.5.2.3. A. Use permitted-**

- (a) Warehouses and godowns;
- (b) Coal, wood and timber yards;
- (c) Contractors plant and storage for building materials;
- (d) Bakeries, confectioneries, ice-cream factories;
- (e) Automobile service and repairing stations with motive power not exceeding 20 H.P. provided the necessary parking Spence are available;
- (f) Power laundries;
- (g) Pasteurization of milk, cream and butter;
- (h) Mechanical workshop with lathes, drills, grinders, spot welding set with motive power not exceeding 20 H.P.
- (i) Printing, book binding, engraving and block making;
- (j) Photo process, embroidery and lace manufacturing cotton and silk printing, arts and crafts, toy making glass cutting etching and polishing, costumes, jewellers and novelties,
- (k) Suphari and Machola grinding, cold storage, metal polishing, travel goods, and canvas and water proof materials, steel slates, wowing machines(Assembly),writing ink employing not more than 10 persons;
- (l) Handloom weaving wooden packing cases and boxes, was products wooden industrial goods, bucket and metal container animal feed;
- (m) Iron rolling and wire setting with motive power not exceeding 20 H.P;
- (n) Atta chakki, oil mills and flour mills with a motive power not exceeding 75 H.P;
- (o) Bus and truck terminal and parking plots;
- (p) Any other use in commercial zone except those specially prohibited hereunder;
- (q) Accessory buildings or uses customarily incidental to any permitted principal use.

**11.5.2.3. B. Use permissible on appeal to the authority-**

- (a) Leather products;
- (b) Fruits and vegetable canning and preservation;
- (c) Saw milling;
- (d) Light manufacturing, railings and grills manufacturing;
- (e) Petrol Filling stations;
- (f) Watchmen or caretakers;
- (g) Canteen and eating house serving the industries;
- (h) All other light industries as defined by the Authority not involving any danger or fire, explosion, noise, vibration; smoke, dust, odour; heat or other objectionable effluents;

**11.5.2.3. C. Use prohibited-**

- (a) All uses not specially permitted herein;
- (b) The industries associated with undesirable features such as excessive smoke, stench, injurious fumes, effluents and other hazards to health and safety of the people.

**11.5.2.4. REGULATION FOR MEDIMUM INDUSTRY ZONE-**

**11.5.2.4. A. Use permitted-**All uses permitted or permissible on appeal to the Authority in light industry zone.

**11.5.2.4. B. All other Medium Industries** except those specially prohibited hereunder.

**11.5.2.4. C. Use prohibited-** the industries associated with undesirable features such as, excessive smoke stench, injurious fumes effluents and other hazard and safety of the people.

**11.5.2.5. REGULATION FOR PUBLIC AND SEMI-PUBLIC ZONE-****11.5.2.5. A. Use permitted-**

- (a) State and Central offices and other public and semi-public buildings;
- (b) Educational and research institution;
- (c) Social, Culture and religious institutions;
- (d) Local and municipal offices;
- (e) Public utilities and municipal facilities;
- (f) Museums, monuments, art galleries, community halls, libraries;
- (g) Building and uses incidental to the above permitted uses.

**11.5.2.5. B: Use permissible on appeal to the Authority-**

- (a) Residences;
- (b) Restaurants, milk bars;
- (c) Any other uses incidental to main use and in no way causing any nuisance or hazard;
- (d) Radio and wireless stations.

**11.5.2.5. C. Use prohibited-** All other uses not specifically permitted herein.

**11.5.2.5. D. The minimum size of the plot for the public and semi-public zone** shall be 5760 sq.ft. or 537.68 sq.m. and the maximum coverage shall be 50% of the total plot area.

**11.5.2.6 REGULATIONS FOR RECREATIONAL AND OPEN SPACE ZONE.****11.5.2.6 A: Use permitted-**

- (a) All public and semi-public recreational use including parks, play grounds, park ways and other special recreational uses;
- (b) Stadium;
- (c) Swimming pools and clubs;
- (d) Botanical and zoological parks;

**11.5.2.6. B Use permissible on appeal to the Authority-**

- (a) Restaurants and selling of eatables;
- (b) Public utilities and municipal facilities;
- (c) Use clearly incidental
- (d) Uses for temporary public entertainment purposes for a period not exceeding 30 days. Structure that may be erected for such entertainment purposes shall be removed at the end of the period and shall in no case be permanently erected.

**11.5.2.6. C. Use prohibited –All uses not specifically permitted herein;**

**11.5.2.6. D.** The height limitations of any structure of building if permitted under this clause front space, side and rear yard within this zone shall be determined by the Authority.

**11.5.2.7 REGULATIONS FOR GREEN BELT ZONE.****11.5.2.7. A. Use Permitted-**

- (a) All agricultural uses and horticulture;
- (b) Gardens and forestry;
- (c) Golf links and club houses;
- (d) Public and private parks, play fields, summer camps or recreation of all types;
- (e) Farm house and their accessory buildings and their uses.
- (f) Churches, temples, mosques and other places of worship;
- (g) Processing and sale of farm products on the property where produced, the servicing and repair of farm machineries and the sale of agricultural supplies.

**11.5.2.7. B Use permissible on appeal to the Authority-**

- (a) Milk chilling stations and pasteurizing plants;
- (b) Rural colleges, boarding houses and hostels, scientific and industrial research laboratories not to be operated for productions of good or other materials.
- (c) Cottage industries, brick making excavation of clay, gravel top soil and other earthen materials;
- (d) Landing fields for planes and helicopter and its necessary appurtenances;
- (e) Utilities and their building;
- (f) Area needed for defence purposes;

- (g) Wireless transmitting and weather stations;
- (h) Any irrigation or flood control works;
- (i) Cemeteries, crematorium and burial grounds;
- (j) In case of existing villages in this zone the normal expansion of the village including rural housing, community facilities and other service facilities would be allowed upto a physical boundary to be fixed by the authority.

**11.5.2.7. C. Use prohibited –**

- (a) All uses not specifically permitted herein.
- (b) The parceling out of land in this zone for the purposes of urban housing shall be absolutely prohibited.

**11.5.2.7. D.** Customary home occupation shall be conducted only by a person resident in the dwelling, the area for such uses shall not exceed 25% of the total floor area of the dwellings, and there shall be no public display of goods.

## **11.6 EXCEPTIONS AND MODIFICATIONS**

### **11.6.1. Exceptions to height yard and set back limits.**

**11.6.1.1.** The height limitations of these regulations shall not apply to temples, Churches and mosques provided that the minimum front and rear set back etc. are maintained.

**11.6.1.2.** Chimneys, elevators, poles, spires, overhead water tanks and other such projections not used for human occupation on appeal the authority.

**11.6.1.3.** Stops, gallery or balcony, weather frame; sun breaker; cornice, caves, window sills; or other ornamental projections may project onto any yard provided this will not reduce the required open spaces in the front sides and rear as prescribed in these regulations on appeal to the authority.

**11.6.1.4.** In any zone, on plots less than 60ft.or 18 metres deep the rear yard may be reduced by one percent of each foot or 30.48c.m. if the plot depth is less than 60 ft.or 18 metres.

**11.6.1.5.** Notwithstanding anything contained in these regulations the front set back in any zone can be prescribed by the authority in pursuance of any scheme. **11.6.1.6.** Height of compound wall in all zones specified in these regulations shall not exceed 6 or 1.8 m. above the ground level of the adjacent street.

### **11.6.2 GROUP PROJECTS**

**11.6.2.1.** In case of group Housing Projects containing a group of twenty or more buildings, notwithstanding anything contained in the regulations, the Authority may prescribe special requirements in harmony with the character of the neighbourhood and ensure that the total open spaces shall not be less than four acres or 1.62 hectares per thousand population.



**11.6.2.2.** The minimum area for the development of group housing is one acre. Set back arrangement of blocks, garages etc. will have to be approved in each case so that a healthy development is ensured. The coverage and F.A.R. for various densities will be as per regulation of Residential use zone.

**11.6.2.3.** Group projects for commercial, light and medium industry zones can be undertaken and notwithstanding anything contained in these regulations, the Authority may prescribe special requirements in consistent with the character of the zone.

## **11.7 ADMINISTRATION AND ENFORCEMENT**

**11.7.1. Approved of plans for Zoning Conformity** - After the adoption of the Master Plan and the Zoning Regulations by the State Government no person shall use, sub-divide or develop any land or erect, re-erect materially alter or change the existing structure of any building or use the building or land within the limit of Bakolia Master Plan area without the plans being approved for Zoning conformity by the Authority as required under Section 13 of the Assam Town and Country Planning Act.1959( as amended).

**11.7.2.1. Application for approval of Zoning conformity** – All application for approval of zoning conformity and for erection re-erection renovation and material alteration of any building or structure shall be accompanied by the following plans in triplicate –

- (a) A block plan of such building site which shall be drawn to the scale of the largest revenue survey maps at the time in existence for the locality and shall show the position and appurtenances of the properties, if any, immediately adjoining streets and the means of access to the building;
- (b) A site plan on 16 ft. or 2 metre scale indicating the plot boundaries the north line position of the existing structures if any, line plan of the proposed structure with its location, set-backs, side and rear yard; projections if any distances from any structure if any, etc. on plot in figured dimensions;
- (c) The detailed floor plan for each floor on 8 ft. or 1 metre scale with projections if any, showing the use of every room or portions of the building or structure and full and detail dimensions of the structure;
- (d) One or two sections, as the case may be through the building showing the height of the plinth above and below the ground level and each floor and of the roof over the staircase;
- (e) Such other matters as may be necessary to determine conformance with and provide for the enforcement of these regulations;
- (f) All the plans and sections shall be signed by the applicant;

**11.7.2.2.** In case of plans pertaining to erection, re-erection or material alteration of any building or structure the Authority may either approve or refuse to approve the plans if it is not in conformity with the Master Plan or Zoning Regulation and shall communicate its decision to the applicant giving the notice within a period of one month from the receipt of the application or such other information as may be called for by the Authority. One copy of the plans shall be returned to the application after the Authority have marked such copy either as approved or disapproved and attested to the same by the signature of the proper official as designated by the Authority. The other two copies of the plans similarly marked, shall be retained by the Authority.



**11.7.2.3.** For the purpose of obtaining permission for sub-division of any plot of land the applicant shall submit the following plans in triplicate together with necessary statements to the Authority-

- (a) A block plan of such land which shall be drawn to the scale of largest revenue survey map at the time in existence for the locality showing the location of the land, boundaries of the proposed land shown on the map and sufficient description to define the same, location, name and present widths of the adjacent roads and major physical characteristics of the land proposed to be sub-divided, including topography, the location and width of any water course and location of any area subject to inundation or flood and north line;
- (b) A plan of such land which shall be drawn to a suitable scale showing the complete layout of the proposed sub-division including location and widths of all the proposed streets dimension, and uses of all plots, location of all drains, Sewerage and other utilities, building lines permissible and northline;
- (c) Any other items of information which may be required by the Authority from time to time;
- (d) All the plans shall be signed by the applicant.

**11.7.2.4.** In case of plan pertaining to sub-division of land, the authority may either grant or refuse the approved of the plans or may approve them with such modifications as it may deem fit and thereupon shall communicate its decision to the applicant giving the notice within three months from the date of receipt of the application or such other information as may be called for by the Authority.

### **11.7.3. SUB-COMMITTEE ON ZONING APPEALS**

**11.7.3.1.** Sub-Committee shall be constituted from out of the members of the Authority by the Chairman and if no Authority is constituted in such cases by the Director of Town and Country Planning which shall be called the "Sub—committee on Zoning appeals".

**11.7.3.2.** The Sub-committee shall consist of at least five members. The Chairman of the Authority and the Director of the Town and Country Planning or his nominee and three other members from the local Authorities representing private sector shall be the members subject to the approval of the Government. The Chairman presides over such meetings and the quorum consists of at least three members. The Sub-committee shall meet one a months to consider any case of Zoning Appeals.

Where no Authority is constituted, the Director, of Town and Country Planning or his nominee and Deputy Commission and three other members from the local Authorities or representing private sector or both shall be the members.

The Deputy Commission or in his absence the Director of Town and Country Planning or his nominee shall preside over such meeting.

**11.7.3.3.** The Chairman and where no Authority is constituted the Director of Town and Country Planning or his nominee shall convene the meeting of the sub-committee on Zoning Appeals.

**11.7.3.4.** This sub-Committee shall have the power to grant variance with respect to front, rear and side yard or building height and area requirements, if at the time of adoption of these Regulations a plot of land is smaller than the minimum size specified for the land in which it is located, and compliance with front, rear side yard and height and area regulations is not feasible because of topography or other special consideration, the case may be brought before the sub-committee on Zoning appeals. This Sub-committee can grant variance and permission given with such modifications as are necessary but should conform as closely as possible to the requirements specified for zone in which the plot is located. In all, the particulars reasons for the variance should be recorded by the sub-committee.

**11.7.3.5.** The Sub-committee on Zoning Appeals shall not have the power however to grant use variance. Where a change of use other than that specified in the zone in which the plot is located is permitted.

**11.7.3.6.** Penalties-Every person, firm body or corporation the commits or knowingly permits a breach of any specified provisions of the Bakolia Master Plan and schemes prepared there under and foregoing Zoning Regulations or who neglects or fails to comply with any such provisions, shall be punishable as provided in the Assam Town and Country Planning Act'1959( as amended).

## ZONING PLAN AND REGULATION

For the purpose of Plan development of Bakolia Master Plan area Zoning Plan and proposal have been made. The Zoning regulation of Bakolia Master Plan contains the following classification of land uses.

<b>Table 10.1: Bakolia – Proposed Zoning Map</b>			
<b>Sl. No.</b>	<b>Zone</b>	<b>Area Covered Sq.km</b>	<b>Percent</b>
1	Agriculture	6.815	33.72
2	Commercial	0.531	2.63
3	Public Semi-Public	2.482	12.28
4	Recreational	0.054	0.27
5	Residential	5.316	26.31
6	Industrial	0.345	1.71
7	Protected Area	3.135	15.51
8	Waterbody	0.567	2.81
9	Road	0.963	4.77
	<b>Total</b>	<b>20.209</b>	<b>100.00</b>



Figure 10.1: Zoning Map of Bakolia Master Plan-2042

